

A Translation of the Nepalese Text of the  
*Suśrutasamhitā*

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# Contents

<b>Sūtrasthāna</b>	<b>9</b>
<b>Sūtrasthāna 1: The Origin of Medical Knowledge</b>	<b>11</b>
Literature . . . . .	11
Translation . . . . .	11
<b>Sūtrasthāna 2: The Initiation of a Student</b>	<b>19</b>
Literature . . . . .	19
Translation . . . . .	19
<b>Sūtrasthāna 3: The Table of Contents</b>	<b>21</b>
Literature . . . . .	21
Translation . . . . .	21
<b>Sūtrasthāna 13: On Leeches</b>	<b>23</b>
Literature . . . . .	23
Translation . . . . .	23
<b>Sūtrasthāna 14: On Blood</b>	<b>31</b>
Previous scholarship . . . . .	31
Translation . . . . .	31
<b>Sūtrasthāna 16: Repairing Pierced Ears</b>	<b>39</b>
Previous literature . . . . .	39
Translation . . . . .	39
<b>Sūtrasthāna 28: Unfavourable Prognosis in Patients with Sores</b>	<b>49</b>
Literature . . . . .	49
Translation . . . . .	49

<b>Nidānasthāna</b>	<b>51</b>
<b>Nidānasthāna 1: The Diagnosis of Diseases Caused by Wind</b>	<b>53</b>
Literature . . . . .	53
Translation . . . . .	53
 <b>Śārīrasthāna</b>	 <b>61</b>
<b>Śārīrasthāna 2: On Semen and Menstrual Fluid</b>	<b>63</b>
Literature . . . . .	63
Translation . . . . .	63
Diagnosis by humours . . . . .	64
Therapies for menstrual blood . . . . .	66
During menstruation . . . . .	67
<b>Śārīrasthāna 3: On Conception and the Development of the Embryo</b>	<b>77</b>
Literature . . . . .	77
Translation . . . . .	77
 <b>Cikitsāsthāna</b>	 <b>85</b>
<b>Cikitsāsthāna 4: On the Treatment of Wind Diseases</b>	<b>87</b>
Literature . . . . .	87
Translation . . . . .	87
<b>Cikitsāsthāna 5: On the Treatment of Serious Wind Diseases</b>	<b>93</b>
Literature . . . . .	93
Translation . . . . .	93
<b>Cikitsāsthāna 15: On Difficult Delivery</b>	<b>105</b>
Literature . . . . .	105
Translation . . . . .	105
 <b>Kalpasthāna</b>	 <b>109</b>
<b>Kalpasthāna 1: Protecting the King from Poison</b>	<b>111</b>

Introduction . . . . .	111
Literature . . . . .	112
Manuscript notes . . . . .	112
Translation . . . . .	113
[Threats to the king] . . . . .	113
<b>Kalpasthāna 2: Poisonous Plants</b>	<b>123</b>
Introduction . . . . .	123
Literature . . . . .	124
Translation . . . . .	124
The effects of poisons . . . . .	128
Slow-acting poison . . . . .	131
The invincible ghee . . . . .	136
Curing the ‘slow-acting’ poison . . . . .	136
<b>Kalpasthāna 3: Poisonous Insects and Animals</b>	<b>137</b>
Literature . . . . .	137
Translation . . . . .	137
The origin of poison . . . . .	141
Patients beyond help . . . . .	143
<b>Kalpasthāna 4: Snakes and Invenomation</b>	<b>145</b>
Introduction . . . . .	145
Literature . . . . .	145
The Seven Stages of Toxic Shock . . . . .	147
Translation . . . . .	147
[The Taxonomy of Snakes] . . . . .	148
[Behaviours] . . . . .	149
[Enumeration of Snakes] . . . . .	152
[Breeding and Gender] . . . . .	153
[Symptoms of snakebite] . . . . .	155
[Summary Verses] . . . . .	157
<b>Kalpasthāna 5: Therapy for those Bitten by Snakes</b>	<b>159</b>
Introduction . . . . .	159
Literature . . . . .	159
Translation . . . . .	160
The application of mantras . . . . .	161

Blood letting . . . . .	162
Internal medications . . . . .	162
Therapies at each pulse of toxic reaction . . . . .	163
<b>Kalpasthāna 6: Beating Drums</b>	<b>169</b>
Introduction . . . . .	169
<b>Uttaratantra</b>	<b>171</b>
<b>Uttaratantra 17: Preventing Diseases of the Pupil</b>	<b>173</b>
Literature . . . . .	173
Translation . . . . .	173
[Complications] . . . . .	183
[Characteristics of the probe] . . . . .	183
[Complications] . . . . .	184
<b>Uttaratantra 38: Diseases of the Female Reproductive System</b>	<b>187</b>
Introduction . . . . .	187
Literature . . . . .	187
Placement of the Chapter . . . . .	187
Parallels . . . . .	189
Philological notes . . . . .	190
Metrical alterations . . . . .	190
The original opening verses . . . . .	190
Translation . . . . .	192
<b>Uttaratantra 39: On Fevers and their Management [draft]</b>	<b>191</b>
Literature . . . . .	191
Remarks on the Nepalese version . . . . .	191
Translation . . . . .	191
<b>Uttaratantra 65: Rules of Interpretation</b>	<b>205</b>
Literature . . . . .	205
Early Sources . . . . .	205
The <i>Arthaśāstra</i> . . . . .	206
The <i>Yuktidīpikā</i> . . . . .	206
Tamil literature . . . . .	206
The <i>Viṣṇudharmottarapurāṇa</i> . . . . .	207

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The <i>Saddanīti</i> . . . . .	208
Āyurvedic literature . . . . .	213
<i>Tantrayukti</i> -inventories . . . . .	219
Earlier Listing . . . . .	220
Later Listing . . . . .	220
Terminology . . . . .	221
1. <i>adhikaraṇa</i> . . . . .	221
2. <i>yoga</i> . . . . .	223
3. <i>padārtha</i> . . . . .	226
Specific issues . . . . .	228
Characteristics of the Manuscript Transmission . . . . .	228
Translation . . . . .	229
<b>Editions and Abbreviations</b>	<b>235</b>
<b>Index of Manuscripts</b>	<b>243</b>
<b>Bibliography</b>	<b>245</b>
<b>Materia Medica Reference Works</b>	<b>277</b>
<b>Materia Medica</b>	<b>281</b>
<b>Glossary</b>	<b>297</b>

Hello world.



# **Sūtrasthāna**



# Sūtrasthāna 1: The Origin of Medical Knowledge

## Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.<sup>1</sup>

## Translation

- 1 Now I shall narrate the chapter on the origin of this knowledge.<sup>2</sup>
- 2 Now, as is well-known, Aupadhenava, Vaitaraṇa, Aurabhra, Puṣkalāvata, Karavīra, Gopurarakṣita, Bhoja, Suśruta and others addressed Lord Divodāsa, king of Kāśi, the best of the immortals, who was in his ashram surrounded by an entourage of sages.<sup>3</sup>

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<sup>1</sup> [HIML](#): IA, 203–204.

<sup>2</sup> Ḍalhaṇa understood the word “knowledge (*veda*)” as specifically “medical knowledge.” He said that the word “longevity” (*āyur*) had been elided. After this opening statement, later manuscripts and commentaries include the attribution, “as the venerable Dhanvantari stated.” The absence of this statement in the early Nepalese manuscripts is highly significant because it removes the outer narrative frame of the *Suśrutasamhitā* (**wuja-2013kleb-2021brai-2019birc-2021**). On the figure of Dhanvatari in medical literature, see [HIML](#): IA 358–361.

<sup>3</sup> On these persons, see [HIML](#): IA 361–363, 369 ff. The authority Bhoja does not appear in the list as published in the vulgate edition (**susr-trikamj12**), and was not included in [HIML](#) amongst “authorities mentioned in the *Suśrutasamhitā*.” Meulenbeld gathered textual evidence about Bhoja at [HIML](#): IA 690–691. **kleb-2021a** has discussed these authors in the context of an anonymous commentary on the *Suśrutasamhitā* that cites them.

- 3 “O Lord, distress arose in our minds after witnessing people thrashing about with cries, assailed by different kinds of pain and injury (*vedanābhighāta*), feeling helpless in spite of having friends, because of diseases arising from the body, the mind and external sources.
- 4 “To quell the illnesses of those who seek happiness and for our own purpose of prolonging life, we desire the science of life (*āyurveda*) that is being taught. Welfare, both in this world and in the next, depends upon it. Therefore, we have come to the Lord in pupillage.”
- 5 The Lord said to them:  
“Welcome to you! My children, all of you are beyond reproach and worthy to be taught.
- 6 “As is well known, Ayurveda is the name of what is said to be the subsidiary part of the Atharvaveda. Before creating people, Svayambhū composed it in hundreds of thousands of verses and a thousand chapters and, after observing the short lifespan and low intelligence of people, he presented it again in eight parts.<sup>4</sup>
- 7 “Surgery, treatment of body parts above the clavicle, general medicine, knowledge of spirits, care of children, and the disciplines of antidotes, rejuvenation and aphrodisiacs.
- 8 “Now, a collection of the characteristics of each component of *Āyurveda*.
- 9 “Among them, [the component] called surgery has the goal of extracting various grasses, wood, stone, dust, iron (?), soil, bone, hair, nails, discharge of pus, malignant wounds and foreign bodies inside the womb, and of determining the application of surgical instruments, knives, caustics and fire by means of sixty definitions.
- 10 “[The component] named the doctrine of treating body parts above the clavicles has the aim of curing diseases situated above clavicles that is, diseases located in ears, eyes, mouth, nose and so on.
- 11 “[The component] called general medicine has the goal of curing illnesses established in the whole body and [diseases] such as fever, tumour, swelling, hemorrhagic disorders, insanity, epilepsy, urinary diseases, diarrhoea and the like.
- 12 “[The component] called knowledge of spirits is for appeasing demons by pacification rites and making food offerings for those whose minds

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4 Svayambhū is another name for Brahṃā, the creator.

- have been possessed by gods, their enemies,<sup>5</sup> Gandharvas, Yakṣas, demons, deceased ancestors, Piśācas, Vināyakas, <sup>6</sup> Nāgas and evil spirits that possess children.
- 13 “[The component] called care of children is for bearing children and purifying defects in a wet-nurse’s milk, and curing diseases that have arisen from bad breast milk and demons.
- 14 “[The component] called the discipline of toxicology is for [knowing] the signs of poison from snake and insect bites and for neutralising various combinations of poisons.<sup>7</sup>
- 15 “[The component] called the discipline of rejuvenation is maintaining youth, bringing about a long life and mental vigour and for curing diseases.
- 16 “[The component] called the discipline of aphrodisiacs brings about the increase, purity, accumulation and production of semen for those whose semen is minimal, bad, depleted, and dry [respectively] and for inducing an erection.
- 17 “Thus, this Āyurveda is taught with eight components.”  
“Among these [components], tell us which is for whom.”
- 18 They said, “After you have conveyed the knowledge of surgery, teach us everything.”
- 19 He said, “So be it.”
- 20 They then said, “Having considered the view of all of us, when we are unanimous, Suśruta will question you. We too will learn what is being taught to him.”
- 21 He said, “So be it.”
- 22 “Now, as is well-known, the aim of Āyurveda is eliminating the disease of one who have been assailed by disease and protecting the healthy; Āyurveda is [that knowledge] in which they find a long life, or that by which long life is known. Learn its best component (i.e., surgery),

5 Dānavas. The insertion marks (*kākapadas*) below the text at this point appears to be by the original scribe.

6 The vulgate doesn’t have *vināyakas* but does add *asuras*, probably under the influence of Ḍaḷhaṇa. Cite Paul Courtwright, Ganesha book.

7 The scribal insertion marks (crosses) above the line at this point in MS K appear to be in a later hand and their referent is lost in the damaged part of the folio. Although MSS MS Kathmandu NAK 1-1079 and MS Kathmandu NAK 5-333 include spiders (*lūtā*) and creepy-crawlies (*sarīṣṛpa*) in the list, it does seem that MS K had a shorter list, and the vulgate edition adds rodents (*mūṣika*).

which is being taught in accordance with tradition, perception, inference and analogy.

23 "For this component is first, the most important, because it is referred to first; it cures wounds and joins together the most important thing, Yajña's head. For, just as it has been said of old, 'the head that had been cut off by Rudra was joined again by the two Aśvins.'

24 "And also, of the eight disciplines of Āyurveda, [surgery] alone is the best because of the quick action of its procedures (*kriyā*), its application of blunt instruments, knives, caustics and fire, and it is common to all disciplines.

25 "Therefore, [surgery] is eternal, meritorious, leads to heaven, brings renown, bestows a long life, and affords a livelihood.

26 "Brahmā said this, 'Prajāpati learned it. From him, the Aśvins. From the Aśvins, Indra. From Indra, I. In this world, I will transmit to those who desire it for the benefit of people.'

[There a verse about this].<sup>8</sup>

27 *For, I (i.e., Brahmā) am Dhanvantari, the first god, the remover of old age, pain and death of mortals.*

*Having understood surgery, the best of the great knowledge systems, I arrived on earth again to teach it here.*<sup>9</sup>

28 In this context, as far as this discipline is concerned, a human being (*puruṣa*) is called an amalgam of the five elements and the embodied soul. This is where procedures (*kriyā*) apply. This is the locus.

Why?

Because of the duality of the world, the world is twofold: the stationary and the moving. Its nature (*ātma*) is twofold, depending on the preponderance of Agni and Soma.<sup>10</sup> Alternatively, it can be considered as being fivefold. The multitude of beings in it are fourfold: they are termed "sweat-born, stone-born, caul-born and egg-born".<sup>11</sup> Where they are concerned, the human being is the main thing; others are his

8 This is an expansion of the scribe's abbreviation *bha* for *bhavati cātra ślokaḥ* "There is a verse about this" (sometimes plural).

9 Note that this verse about the origin of surgery is the first place that the name 'Dhanvantari' is introduced in the Nepalese version of the work. Dhanvantari is here identified with Brahmā, the creator of the world.

10 **wuja-2004**.

11 This fourfold classification of beings is paralleled with closely-related vocabulary in *Bhelasamhitā* 4.4.4 (**kris-2000mook-1921**).

- support. Therefore, the human being (*puruṣa*) is the locus.
- 29 Diseases are said to be the conjunction of the person and suffering (*duḥkha*). There are four of them: invasive, bodily, mental and inherent. The invasive ones are caused by an injury. The bodily ones are based on food, caused by irregularities (*vaiṣamya*) in wind, bile, phlegm and blood.<sup>12</sup>
- The mental (*mānasa*) ones, caused by desire (*icchā*) and hatred (*dveṣa*), include: anger (*krodha*), grief (*āśoka*), misery (*dainya*), overexcitement (*harṣa*), lust (*kāma*), depression (*viṣāda*), envy (*īrṣyā*), jealousy (*asūyā*), malice (*mātsarya*), and greed (*lobha*).
- The inherent (*svābhāvika*) ones are hunger, thirst, old age, death, sleep and those of the temperament (*prakṛti*).
- These too are located (*adhiṣṭhāna*) in the mind and body.
- Scarification (*lekhana*), nourishment (*bṛṇhana*), purification (*saṃśodhana*), pacification (*saṃśamana*), diet (*āhāra*) and regimen (*ācāra*), properly employed, bring about their cure.
- 30 Furthermore, food is the root (*mūla*) of living beings as well as of strength (*bala*), complexion (*varṇa*) and vital energy (*ojas*). It depends on (*āyatta*) the six flavours (*rasa*). Flavours, furthermore, have substances as their substrate (*āśrayin*). And substances are remedies (*oṣadhī*).<sup>13</sup> There are two types: stationary (*sthāvara*) and moving (*jaṅgama*).
- 31 Of these, there are four types of stationary ones: fruit trees (*vanaspati*), flowering trees (*vrkṣa*), herbs (*oṣadhi*) and shrubs (*vīrudh*).<sup>14</sup> Amongst these, the “fruit trees” have fruit but no flowers.<sup>15</sup> The “flowering trees” have flowers and fruit. The “herbs” die when the fruit is ripe. “Shrubs” put out shoots.

<sup>12</sup> Note that four humoral substances are assumed here.

<sup>13</sup> Pāṇini 6.3.132 provides that the final vowel of the noun *oṣadhi* may be lengthened ( $\rightarrow oṣadhī$ ) under certain conditions. These conditions require that the word be used in a Vedic mantra and not in the nominative. Neither condition is met in this passage, yet the author uses the form *oṣadhī*. This form is in fact not uncommon in medical literature as well as in epics, purāṇas, smṛtis, and other parts of Sanskrit literature.

<sup>14</sup> Ca.sū.1.71–72 also describes these four types of medicinal plant in similar terms but with slightly differing names: *oṣadhi* is a plant that ends after fruiting, *vīrudh* is a plant that branches out, *vanaspati* is a tree with fruit, and *vānaspatya* is a tree with fruit and flowers.

<sup>15</sup> The MSS agree in reading *phalavantyaḥ* “having flowers” which is grammatically non-standard. This form is also found in the *Viṣṇudharmottarapurāṇa* (1.92.27, **sarm-1912**).

- 32 As is well known, moving remedies are also of four types: those born in in a caul (*jarāyuja*), those born from eggs (*aṇḍaja*), those born of sweat (*sveda*), and shoots (*udbhid*). Amongst these, those born in a caul include animals (*paśu*), humans, and wild animals (*vyāla*). Birds, creepy-crawlies (*sarīṣṛpa*) and snakes are “born of eggs.” Worms (*kṛmi*), small insects (*kunta*) and ants (*pipīlika*) and others are born of sweat.<sup>16</sup> Shoots include red velvet mites (*indragopa*) and frogs (*maṇḍūka*).<sup>17</sup>
- 33 In this context, among the stationary remedies, skin (*tvak*), leaves (*patra*), flowers (*puṣpa*), fruits (*phala*), roots (*mūla*), bulbs (*kanda*), sap (*kṣīra*), resin (*niryāsa*), essence (*sāra*), oil (*sneha*), and juice extract (*svarasa*)<sup>18</sup> are useful; among the moving remedies pelt (*carman*), hair, nails, and blood (*rudhira*) and so forth.
- 34 And earth products (*pārthiva*) include gold and silver.<sup>19</sup>
- 35 The items created by time (*kālakṛta*) are clusters (*samplava*) as far as wind and no wind (*nivāta*), heat and shade, darkness and light and the cold, hot and rainy seasons (*varṣā*) are concerned. The divisions of time are the blink of the eye (*nimeṣa*), a trice (*kāṣṭhā*), minutes (*kalā*), three-quarters of an hour (*muḥūrta*), a day and night (*ahorātra*), a fortnight (*pakṣa*), a month (*māsa*), a season (*ṛtu*), a half-year (*ayana*), a year (*saṃvatsara*), and yuga (*yuga*).<sup>20</sup>
- 36 These naturally cause accumulation (*sañcaya*), irritation (*prakopa*), pacification (*upaśama*) and alleviation (*pratīkāra*) of the humours (*doṣa*). And they have practical purposes (*prayojanavat*).
- [There are verses about this:]<sup>21</sup>
- 37 *This fourfold category is taught by physicians as a cause for the agitation and quelling of bodily diseases.*<sup>22</sup>

16 The word *kunta*, though marked as “lexical” in most dictionaries, is in fact found in literature, commonly as a compound with *pipīlika*; the compound sometimes seems to be understood a type of ant (*tatpuruṣa* compound) rather than as a pair of insects (*dvandva* compound).

17 On *indragopa*, see **lien-1978**.

18 On juice extract (*svarasa*) see CS 1.1.73, 1.4.7; Ḍalhaṇa on 4.10.12 (**Su 1938**: 450).

19 The flow of concepts in the treatise seems to be interrupted here.

20 These units are presented at 1.6.5 (**Su 1938**: 24) and discussed by **haya-2017**.

21 See footnote 8.

22 On the topic of the “group of four,” the commentator Ḍalhaṇa considers them to be “food, behaviour, earthen products and items created by time.” He refers to the author of the lost commentary entitled *Pañjikā*, and to Jejjāta (**HIML**:IA, 372–3, 192). In his view, these early commentators do not agree that the fourfold grouping



- 38      *There are two kinds of invasive diseases. Some certainly<sup>23</sup> affect (ni√pat) the mind, others the body. Their treatment (kriyā) is of two kinds too.*
- 39      *For those that affect the body there is physical (śārīravād) therapy, whereas for those that affect the mind there is the collection (varga) of desirable sensory experiences like sound that bring comfort (sukha ).*
- 40      *Along these lines (evam), this brief explanation of the four factors (catuṣṭaya) is given:*
- human being (puruṣa),
  - disease (vyādhi),
  - remedies (oṣadhi),
  - the time for therapies (kriyākāla).

In this context,

- from the mention of the word “human,” the collection of substances that arise from it, such as the elements, and the particulars (vikalpa) of its major and minor parts (aṅga) such as skin (tvak), flesh (māṃsa), ducts (sirā), sinews (snāyu), bones (asthi) and joints (sandhi) are meant.
- From the mention of “diseases,” all diseases caused by wind, bile, phlegm, congested humours (sannipāta), external factors (āgantū) and inherent factors (svabhāva) are intended (vyākhyāta).
- From the mention of “remedies,” there is the teaching of substances, tastes, potencies, post-digestive tastes.
- From the mention of “procedures (kriyā),” therapies (karman) such as oiling and excision (chedya) are taught.
- From the mention of the word “time,” every single teaching about the times for procedures is meant.

[There is a verse about this:]<sup>24</sup>

- 41      *This seed of medicine has been declared in brief. Its explanation will be given in one hundred and twenty chapters.<sup>25</sup>*

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(caturvarga) refers to the quartet of stationary (sthāvara), moving (jaṅgama), earthen products (pārthivā) and items created by time (kālakṛta) (Su 1938: 9a).

23 The text uses an archaic interjection here, *ha*.

24 See footnote 8.

25 This is the number of chapters in the first five sections of the work, namely the *Sūtra*,

- 42 There are one hundred and twenty chapters in five sections (*adhyāya*).<sup>26</sup>  
In that regard, having divided them, according to their subject matter,  
into the Ślokaśthāna, the Nidāna, the Śārīra, the Cikitsita and the Kalpa,  
we shall mention this in the Uttaratantra.<sup>27</sup>

[There is a verse about this:]<sup>28</sup>

- 43 *Someone who reads this eternal proclamation of the King of Kāśī,  
that was declared by Svayambhu, will have good karma on earth,  
will be respected by kings and upon death will achieve the world of  
Śakra.*

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*Nidāna-, Śārīra-, Cikitsā- and Kalpa-sthānas.* These have 46, 16, 10, 40 and 8 chapters respectively. The *Uttaratantra* has 66 chapters.

<sup>26</sup> On *viṃśa* in the sense of “greater by 20” see P.5.2.46 *śadantaviṃśateś ca*.

<sup>27</sup> The end of this sentence reads oddly. The vulgate edition adds an object: “[we shall mention] the remaining topics [in the Uttara]” which smooths out the difficulty, but this is supported in none of the Nepalese MSS. At the start of the *Uttaratantra* (*Su* 1938: 1.3–4ab) there is indeed a statement that picks up the point about there being 120 chapters.

<sup>28</sup> See footnote 8.

# **Sūtrasthāna 2: The Initiation of a Student**

## **Literature**

[HIML](#): IA, 204prei-2007wujad-2012.

## **Translation**



# Sūtrasthāna 3: The Table of Contents

Literature

Translation

1  
54 <sup>29</sup>



# Sūtrasthāna 13: On Leeches

## Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of studies on Indian leeches and their application.<sup>30</sup>

A Persian version of this chapter of the *Suśrutasamhitā* was included in *Sikandar Shāh's Mine of Medicine* (*Ma'din al-shifā' i Sikandar-Shāhī*) composed in 1512 by Miyān Bhūwah b. Khawāṣṣ Khān.<sup>31</sup>

More recently, Brooks has explored the sense of touch in relation to leeching and patient-physician interactions.<sup>32</sup>

## Translation

- 1 And now we shall explain the chapter about leeches.
- 3 The leech is for the benefit of kings, rich people, delicate people, children, the elderly, fearful people and women. It is said to be the most gentle means for letting blood.
- 4 In that context, one should let blood that is corrupted by wind, bile or phlegm with a horn, a leech, or a **gourd**, respectively. Or, each kind can be made to flow by any of them in their particular way.<sup>33</sup>

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<sup>30</sup> [HIML](#): IA, 209; IB, 324, n. 131.

<sup>31</sup> [sidd-1959](#)[azee-1971](#)[stor-1971](#)[HIML](#): IB, 324, n. 128[spez-2019](#).

<sup>32</sup> [broo-2020](#); [broo-2020b](#); [broo-2020c](#); [broo-2021](#).

<sup>33</sup> This sentence is hard to construe grammatically, although its meaning seems clear. In place of विशेषस्तु, Cakrapāṇidatta and Ḍalhaṇa both read विशेषतस्, which helps interpretation ([acar-1939](#), [Su 1938](#): 55). It is noteworthy that the critical syllable स्तु is smudged or corrected in both MS Kathmandu NAK 1-1079 and in 1-1146, a much later Devanāgarī manuscript.

There is an insertion in the text, printed in parentheses in the vulgate at 1.13.4

- 5x And there are the following about this:
- 1.13.5 The horn of cows is praised for being unctuous, smooth, and very sweet. Therefore, when wind is troubled, that is good for bloodletting.<sup>34</sup>
- 1.13.5a Having a length of seven fingers and a large body the shape of a half moon, should first be placed into a cut. A strong person should suck with the mouth.<sup>35</sup>
- 6 A leech lives in the cold, is sweet and is born in the water. So when someone is afflicted by bile, they are suitable for bloodletting.<sup>36</sup>
- 7 A **gourd** is well known for being pungent, dry and sharp. So when someone is afflicted by phlegm it is suitable for bloodletting.
- 8 In that context, at the scarified location one should let blood using a horn wrapped in a covering of a thin bladder, or with a **gourd** with a flame inside it because of the suction.<sup>37</sup>
- 9 Leeches are called “*jala-ayu-ka*” because water (*jala*) is their life (*āyur*).<sup>38</sup> “Home” (*okas*) means “dwelling;” their home is water, so they are called “water-dwellers (*jalaaukas*).”
- 10 There are twelve of them: six are venomous and just the same number are non-venomous.

(Su 1938: 55) as विशेषतस्तु विस्राव्यं शृङ्गजलौकालाबुभिर्गृहीयात्. This insertion is not included in the earlier edition of the vulgate, but is replaced by स्निग्धशीतरूक्षत्वात् (**susr-trikamji2**). Ḍalhaṇa noted that, “this reading is discussed to some extent by some compilers (निबन्धकार), but it is definitely rejected by most of them, including Jejjhāṭa.”

- 34 The vulgate replaced “smooth” with “hot.”
- 35 This passage is not found in the vulgate, but it is similar to the passage cited by Ḍalhaṇa at 1.13.8 (Su 1938: 56) and attributed to Bhāluki. Bhāluki was the author of a *Bhālukitantra* that may have predated Jejjhāṭa and might even have been one of the sources for the *Suśrutasaṃhitā* (HIML: IA, 689–690 *et passim*). The editor Ācārya was aware of this reading in the Nepalese manuscripts; see his note 4 on 1.13.5 (Su 1938: 55, note 4).
- 36 Note that the particular qualities (*guṇas*) of the leech in this and the following verses counteract the quality of the affliction. See **broo-2018**.
- 37 There are questions about the wrapping or covering of the horn. Other versions of the text, and the commentator, propose that there may be two coverings, or that cloth may be a constituent. Comparison with contemporary horn-bloodletting practice by traditional Sudanese healers suggests that a covering over the top hole in the horn is desirable when sucking, to prevent the patient’s blood entering the mouth (**pbs-2020**). Our understanding of this verse is that the bladder material is used to cover the mouthpiece and then to block it, in order to preserve suction in the horn for a few minutes while the blood is let.
- 38 This is a folk etymology.



11 Here is an explanation of the venomous ones, together with the therapy:

- Black (*kṛṣṇā*)
- Mottled (*karburā*)
- Sting-gush (*alagarddā*)<sup>39</sup>
- Rainbow (*indrāyudhā*)
- Oceanic (*sāmudrikā*)
- Cow-praising (*govandanā*)<sup>40</sup>

Amongst these,

- The one called a Black is the colour of kohl and has a broad head;
- The one called Mottled is like the [Indian mottled eel](#), long with a segmented (*chinna*), humped belly.
- The one called Sting-gush is hairy, has large sides and a black mouth.
- The one called Rainbow is coloured like a rainbow, with vertical stripes.
- The one called Oceanic is slightly blackish-yellow, and is covered with variegated flower patterns.
- The one called Govandana is like a cow's testicles, having a bifurcated form on the lower side, and a tiny mouth.

When someone is bitten by them, the symptoms are: a swelling at the site of the bite, excessive itching and fainting, fever, a temperature, and vomiting. In that context the Great Antidote (*mahāgada*) should be applied in drinks and liniments (*ālepana*), etc.<sup>41</sup> A bite by the Rainbow leech is not treatable. These venomous ones have been explained together with their remedies.

12 Now the ones without venom.<sup>42</sup>

- Tawny (*kapilā*)
- Ruddy (*piṅgalā*)
- Dart-mouth (*śaṅkumukhī*)

39 Treating गर्दा as गर्द्धा and translating as in RV 8.1.20, with **jami-2014**. But if गर्द is to be taken from √गर्द् then we might have “crying from the sting.”

40 The manuscripts all read गोवन्दना against the vulgate's गोचन्दना.

41 The “Great Antidote” is described in the Kalpasthāna, at 5.5.61–63ab ([Su 1938](#): 578). Ḍalhaṇa and the vulgate included errhines in the list of therapies, and Ḍalhaṇa added that “etc.” indicated showers and baths too.

42 The translations of the names of these leeches are slightly whimsical, but give a sense of the original; सावरिका remains etymologically puzzling.

- Mouse (*mūṣikā* )
- Lotus-mouth (*puṇḍarikamukhī*)
- Sāvarikā (*sāvarikā* )

Amongst these,

- The one called Tawny has sides that look as if they are dyed with realgar and is the colour of glossy mung beans on the back.<sup>43</sup>
- The one called Ruddy is a bit red, has a round body, is yellowish, and moves fast.
- The one called Dart-mouth is the colour of liver, drinks fast and has a long mouth.
- The one called Mouse is the colour and shape of a mouse and has an undesirable smell.
- The one called Lotus is the colour of mung beans and has a mouth that looks like a lotus.
- The one called Sāvarikā has the colour of a lotus leaf and is eighteen centimetres long. But that one is used when the purpose is an animal.

The non-venomous ones have been explained.

- 13 Their lands are Yavana, Pāṇḍya, Sahya, Potana and so on.<sup>44</sup> Those in

43 The compound *सिग्धमुद्गवर्णा* is supported by all the manuscript witnesses and is translated here. Nevertheless, the reading of the vulgate, that separates *सिग्धा*, f., “slimy” as an adjective for the leech, seems more plausible: “it is slimy and the colour of a mung bean.”

44 This passage is discussed by **kart-2015**. At the time of the composition of the *Suśrutasaṃhitā*, Yavana would most likely have referred the Hellenistic Greek diaspora communities in Bactria and India (**law-1984mair-2013mair-2014**). Unproblematically, the Pāṇḍya country is the extreme south-eastern tip of the Indian subcontinent (**schw-1978**), and Sahya refers to the Western Ghats (**schw-1978**). The vulgate reading “Pautana” is not a known toponym. Potana was the ancient capital of the Aśmaka Mahājanapada mentioned in Pali sources and in inscriptions at Ajāntā and elsewhere, and identified by **law-1984gupt-1989** with Pratiṣṭhāna, modern Paithan on the Godavari river. The recurring ancient epithet describing the Aśmaka kingdom is that it was on the Godāvarī, and Paithan is flanked to the south west and south east by this river.

Some scholars have identified the name with modern Bodhan in Telangana (**sirc-1971schw-1978sen-1988**), but this implausible identification is traceable to a speculative suggestion by **rayc-1953** based on a variant form “Podana” found in some early manuscripts of the *Mahābhārata*: “This name reminds one of Bodhan in the Nizam’s dominions,” “possibly to be identified with Bodhan.”

- particular have large bodies and are strong, they drink rapidly, consume a lot, and are without venom.
- 14 In that context, the venomous leeches are those originating in decomposing venomous insects, frogs, urine, feces and in polluted water.<sup>45</sup> The , non-venomous ones originate in decomposing **sacred lotus**, **blue water-lily**, **white water-lily**, **fragrant lotus**, **pondweed** and in pure waters.
- 15 There is a verse on this:
- These ones move about in sweet-smelling habitats that are abundant with water. Traditionally, they do not behave in a confused manner or lie in the mud.*<sup>46</sup>
- 16 They can be caught with a fresh hide or after being caught in other ways.<sup>47</sup>
- 17 Then these should be put into a large new pot furnished with mud and the water from lakes or wells. One should provide what they need to eat. One should grind up **pondweed**, **dried meat**, and aquatic tubers, and one should give them grass and aquatic leaves to lie on, and every three days water and food. Every week, one should transfer them into a different pot.
- 18 And on this:

Ḍalhaṇa on 1.13.13 (Su 1938: 57) anachronistically identified “Yavana” as the land of the Turks (तुरुष्क) and “Pautana” as the Mathurā region. He also noted, as did Cakra-pāṇidatta (acar-1939), that this passage was not included by some authorities on the grounds that the habitats of poisonous and non-poisonous creatures are defined by other criteria.

45 The vulgate on 4.13.14 (Su 1938: 57) includes fish in this list.

46 Ḍalhaṇa on 1.13.14 (Su 1938: 57) discussed why the leeches would not “behave in a confused manner” (सङ्कीर्णचारिन्), saying that they do not “eat a diet that is unwholesome because of poison etc.” (विषादिविरुद्धाहारभुजः). The use of विरुद्ध is odd here, but cf. Ḍalhaṇa’s suggestion at 4.23.4 (Su 1938: 485) that विरुद्ध refers to the chapter on wholesome and unwholesome foods (हिताहिताध्याय, 1.20 (Su 1938: 94–99)).

47 “Fresh hide” (आर्द्रचर्मन्) may suggest that the animal skin still includes meat or blood that is attractive to a leech.

The Nepalese witnesses all read गृहीत्वा “having (been) caught” for the vulgate’s गृहीयात् “one may grasp (by other means).” This is hard to construe clearly.

Ḍalhaṇa on 1.13.15 (Su 1938: 57) quoted “another treatise” (तन्त्रान्तरवचनात्) that said that autumn is the time to collect leeches. He also explained that “other methods” of collecting leeches included smearing a leg or other limb with cream, butter or milk, etc., or using a piece of flesh from a freshly killed animal.

*One should not nurture those that are thick in the middle, that are injured,<sup>48</sup> or thin, those that are not born in the proper habitat, those that will not attach, that drink little or those that are venomous.*

- 19 First of all, get the patient who has an ailment that is treatable by leech-bloodletting to sit or lie down. Then, dry any diseased opening with powders of earth and cow-dung. Then make them free from impurities, with their bodies smeared with **Indian mustard** and **turmeric** and moving about in the middle of a cup of water. After all this, the physician should make them attach to the site of the ailment. Now, for those that are not attaching, he should provide a drop of milk or a drop of blood. Alternatively, one should make some marks with a knife (*śas-trapada*).<sup>49</sup> And if it still will not attach, make other ones attach.
- 20 He can know that it is attached when it fixes on, hunching its neck and making a mouth like a horse's hoof. Then, he should cover it with a wet cloth and keep it there.
- 21 Now, if the physician knows, from the arising of pricking and itching at the bite, that clean blood is being taken, he should take it off. Then, if it does not release because of the scent of blood one should sprinkle its mouth with powdered **rock salt**.
- 22 Then he should coat it with **rice-grain chaff**, rub its mouth with sesame oil and salt and cause it to vomit by holding its tail in his left hand and very slowly rubbing it with the thumb and finger of his right hand in the proper direction, as far as the mouth, until it is properly purged.<sup>50</sup> A properly purged leech placed in a goblet of water moves about, wanting to eat. If it sinks down, not moving, it is badly purged; one should make it vomit once again.  
A badly purged leech develops an incurable disease called Indrapada.<sup>51</sup> One that protects its deflated head with its body, suddenly curls up and makes the water warm is traditionally said to have Indrapada.

48 Pace Dalhaṇa on 1.13.18 (Su 1938: 57) who glossed अमनोज्ञदर्शन as “nasty looking.”

49 On पद as a “mark,” “imprint,” or “place of application,” cf. 4.1.29 (Su 1938: 399), 5.4.15 (Su 1938: 571), etc. See footnote 443.

50 The expression शालितण्डुलकाण्डन, “rice-grain chaff” could be read as “**unhusked rice**, **rice grains** and **chaff**” but this seems unlikely in the context.

51 The Nepalese witnesses read इन्द्रपद/इन्द्रापद, but the vulgate reads इन्द्रमद, a term that is found in other texts such as the *Manasollasa* 6.641 (vol. 1, 87), where it is a fever affecting fish, and the *Garudapurana* 1.147.3 (tr. **garuda**) where it is fever affecting clouds; see further **broo-inpress**.

- Thus, one should keep such a one as before.<sup>52</sup>
- 23 After observing the proper or improper flow of the blood, one should rub the opening made by the leech with honey.<sup>53</sup> Alternatively, one may bind it up and smear it with ointments that are astringent, sweet, oily and cold.
- 24 And about this there is the following:
- When the leeches have just drunk, one should pour ghee on it. And one should pour on to the blood things that are capable of stopping the blood.*
- 25 *Someone who knows habitats, the capture, feeding and bloodletting of leeches is worthy to treat a king.*

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52 The vulgate includes “well purged” as the object in this sentence, which makes better sense.

53 In the Nepalese witnesses, the object of this passage is जलौकामुखम् “the mouth of the leech,” that we have interpreted, perhaps freely, as “opening made by the leech.” Logically and as transmitted in the vulgate, this passage should be about managing the wound on the patient that has been made by the leech.



# Sūtrasthāna 14: On Blood

## Previous scholarship

Meulenbeld offered both an annotated summary of this chapter as well as a study specifically on the place of blood in Ayurvedic theory.<sup>54</sup>

## Translation

- 1 Now we shall declare the chapter about blood.
- 2
- 3 Food is of four types.<sup>55</sup> It is endowed with six tastes and is made of the five elements.<sup>56</sup> It has either two or eight potencies, and is endowed with many qualities. <sup>57</sup> Chyle (*rasa*) is the most intangible essence of this food that is properly transformed. It is of the nature of fire. Chyle is situated in the heart. From the heart, it enters into the twenty-four arteries—ten upward arteries, ten downward, and four

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54 [HIML](#): IA, 209–201 and [meul-1991](#). Meulenbeld’s footnotes on this chapter in [HIML](#): IB, 325 ff. refer often to “Hoernle’s note.” This appears to be a reference to Hoernle’s copious notes to his translation of this chapter ([hoer-1897](#)). [meul-1990](#) also discussed Sanskrit veterinary texts in the light of their standard theory of four humours, including blood.

55 Ḍalhaṇa on 1.14.3 ([Su 1938](#): 59) said that the four types of food are those that can be drunk, licked, eaten and chewed (पेयलेह्यभोज्यभक्ष्य). The main text of the *Carakasamhitā* is explicit about these categories at 4.3.4(1) ([Ca 1941](#): 308): पानाशनभक्ष्यलेह्य । “things drunk, eaten, chewed or licked.” [yagi-1994](#) discussed the distinction between भक्ष्य and भोज्य; for further Indological background on foods, see the studies by [oliv-1995](#); [oliv-2001](#) and the classic reference works by [acha-1994](#); [acha-1998](#). The long, final adhyāya of the *Suśrutasamhitā*’s sūtrasthāna (ch. 46) is a treatise on food in āyurveda.

56 *Idem*, Earth, water, fire, air, space

57 Ḍalhaṇa related these qualities to the twenty standard गुण of āyurveda; see, e.g., their listing by Vāgbhaṭa, translated by [wuja-2003](#).

sideways—and doing so day after day owing to the reaction of past activities that are caused by the invisible,<sup>58</sup> it satisfies the entire body, enlivens it, prolongs it,<sup>59</sup> and makes it grow. The motion of the entity that flows throughout the body should be understood by inference. That motion causes deterioration and growth.

With regards to the chyle that flows through all the limbs, humours, body tissues, and impurities of the body, the question arises, “Is it moist or is it fiery?” It is understood to be moist because of its fluidity while flowing<sup>60</sup> and due to attributes such as mobility, lubrication, enlivening, satisfaction, and supporting.<sup>61</sup>

- 4 That watery chyle is then reddened after reaching the liver and spleen.  
5 There are verses about this.

*Experts know that blood is the untransformed fluid that is reddened by the pure fire element within the bodies of living beings.*

- 6 *It is only due to chyle that women’s blood called menses exists. It increases from the twelfth year and decreases after the fiftieth year.*  
7 The menstrual blood, however, is called fiery.<sup>62</sup> That is due to the embryo being fiery and moist.<sup>63</sup>  
8 Others state that the embryo as constituted of the five elements and the preceptors call it the living blood.  
9 There are verses about this.

*That is because blood exhibits the qualities of earth, etc. such as a fleshy smell, fluidity, redness, pulsation and thinness.*

- 58 अदृष्ट (unseen): Doing any righteous or unrighteous action produces good merit and demerit respectively. This good merit and demerit are called अदृष्ट (invisible) because it cannot be directly known but can only be assumed through logical deduction.  
59 In the sense of prolonging its lifespan  
60 The vulgate emends अनुसरणे to अनुसरण- against the Nepalese MSS. This is logical because mobility would seem to be one of the attributes. Although it is awkward, we read अनुसरणे as a locative absolute “while flowing.”  
61 The duality being discussed here is that of the essential qualities of Fire and of Soma (agni and soma). See further discussion by wuja-2004 and ange-2021.  
62 Ḍalhana commented that this is to distinguish the menstrual blood from regular blood that is gentle.  
63 Ḍalhana commented here that the embryo is called such because the menstrual blood is fiery and the semen is gentle (सौम्य). On the fiery/moist distinction (आग्नेय/सौम्य), see wuja-2004; ange-2021.



- 10 *Blood is formed from chyle, flesh from blood, lymph from flesh, bone from lymph, marrow from bone, semen from marrow, and progeny from semen.*
- 11 There, the essence (chyle) of food and drink is the nourisher of these body tissues.
- 12 There is a verse about this.
- A living being should be known as born from chyle. One should diligently preserve<sup>64</sup> chyle by administering food and drink, being nicely disciplined with food<sup>65</sup>.*
- 13 The verbal root *rasa* means movement.<sup>66</sup> Because it keeps moving day after day, it is called *rasa* (chyle).<sup>67</sup>
- 14 Chyle stays in every body tissue for 2548 ((25\*100)+48) *kalās* and nine *kāṣṭhas*. As such, it becomes semen after a month. For women, it becomes menses.
- 15 Here are verses about this.
- According to similar and dissimilar treatises, the quantity of kalās in this group<sup>68</sup> is 18,090.*
- This is the particular transformation period regarding chyle that lasts for a person with mild fire<sup>69</sup>. For a person with developed fire, one should know it to last for the exact same time<sup>70</sup>*
- 16 Resembling the expanse of sound, flame, and water, that entity moves along in a minute manner throughout the entire body<sup>71</sup>.

64 All three manuscripts have रक्षेत which is an incorrect form. रक्षेत् is the correct form.

65 आहारेण - The third case is used. The semantic property of the third case used here is unclear. Unclear regarding if there is any rule in the *Aṣṭādhyāyī* justifying this usage.

66 kunj-1907

67 In the list of verbal roots of Pāṇini, the verbal root रस(rasa) means taste and moistening. It does not mean movement.

68 duration of chyle in all the body tissues as a whole

69 Perhaps this refers to the digestive fire.

70 Although the vulgate does not have this verse, there is an argument presented in Ḍalhaṇa's commentary on 1.14.16 (Su 1938: 63) that for a person with intense fire, chyle becomes semen after eight days, and for a person with mild fire, chyle becomes semen after a month. Ḍalhaṇa said that this opinion is refuted by Gayadāsa Ācārya in many different ways. Ḍalhaṇa continued that the proper understanding is that for a person with a strong fire, chyle becomes blood in a little less than a month, and for a person with a mild fire, chyle becomes blood in a little more than a month.

71 Ḍalhaṇa comments (Su 1938: 63) that the expanse of sound indicates the sideways

- 17 The aphrodisiac medicines, however, being used like a purgative due to their excessively strong characteristics, evacuate the semen.
- 18 Just as it cannot be said that the fragrance in a flower bud is present in it or not, but accepting that there is the manifestation of existing entities<sup>72</sup>, it,<sup>73</sup> however, is not experienced only due to its intangibility. That same entity is experienced at another time in the blossomed flower. In the same way regarding children also, the manifestation of semen happens because of the advancement of age<sup>74</sup>. For women, the manifestation is different as rows of hair, menses, etc.
- 19 That very essence of food does not nourish very old people due to their decaying bodies.
- 20 These entities are called body tissues (*dhātu-s*) because they bear the body<sup>75</sup>.
- 21 Their decay and growth are due to blood. Therefore, I will speak about blood. In that regard: The blood that is foamy, tawny, black, rough, thin, quick-moving, and non-coagulating is vitiated by air. The blood that is dark green, yellow, green, brown, sour-smelling, and unpleasant to ants and flies is vitiated by bile. The blood that is orange, unctuous, cool, dense, slimy, flowing, and resembling the colour of flesh-muscles is vitiated by phlegm. The blood having all these characteristics is vitiated by the combination of all three of them. The blood that is extremely black is vitiated by blood<sup>76</sup> just as bile. The blood that has the combined characteristics of vitiations of two humours is vitiated by two humours.
- 22 The blood that is of the colour of insect cochineal, not thick, and not discoloured should be understood to be in its natural state.
- 23 I will speak of the types of blood that should be let out in another sec-

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movement of chyle, the expanse of flame indicates the upward movement of chyle, and the expanse of water indicates the downward movement of chyle.

72 This is the doctrine of pre-existence of the effect (सत्कार्यवाद, *satkāryavāda*) first propounded by Sāṅkhya philosophers.

73 fragrance

74 Since chyle becomes semen in a month's time, a question arises "Why then is semen absent in young children?". The reply is given in this passage.

75 The etymological meaning of the Sanskrit word धातु (*dhātu*) is "that which bears [the body]". Thus, the body tissues are called *dhātu-s* because they bear the body. This means that the body tissues are the elements that make up the body and sustain it.

76 Y. T. Ācārya and N. R. Ācārya (Su 1938: 64) quote Cakrapāṇidatta in a footnote: "This is the symptom when the blood vitiated in one part of the body vitiates the blood in another part."

tion.

- 24 Now, I speak of those that should not be let out. The swelling appearing in all the limbs of the body of a weak person that happens due to consuming sour food. The swellings of people with jaundice, piles, large abdomen, emaciation, and those of pregnant women.
- 26 In that regard, one should quickly insert the surgical instrument that is simple, not very close, fine, uniform, not deep, and not shallow.
- 26a One should not insert the instrument into the heart, lower belly, anus, navel, waist, groins, eyes, forehead, palms, and soles.
- 26b In the case of swellings filled with pus, one should treat them in the same way as stated earlier.
- 27-27a There, when the swelling is not pierced properly, when phlegm and air have not been sweated out, after having a meal, and due to thickness, the blood does not ooze out or oozes out less. Here is a verse regarding it.
- 28ab-cd *Blood does not ooze out of humans when in contact with air, passing stool or urine, and when intoxicated, unconscious, fatigued, sleeping, or in cold surroundings.*
- 29 That vitiated blood when not taken out increases the disease.
- 30 The blood that is let by an ignorant physician in cases of very hot surroundings, profuse perspiration, and excessive piercing, flows excessively. That profuse bleeding causes the appearance of acute headache, blindness, and partial blindness, or it quickly causes subsequent wasting, convulsions, tremors, hemiplegia, paralysis in a limb, hiccups, coughing, panting, jaundice, or death.
- 31ab-cd The physician should let out the blood when the weather is not very hot or cold, when the patient is not perspiring or heated up, and after the patient has had a sufficient intake of gruel.
- 32ab-cd After coming out properly, when the blood stops automatically, one should know that blood to be pure and drained properly.
- 33ab-cd The symptoms of the proper drainage of blood are the experience of lightness, alleviation of pain, a complete end of the intensity of the disease, and satisfaction of the mind.
- 34ab-cd Defects of the skin, tumours, swellings, and all diseases caused by blood never arise for those who regularly drain their blood.
- 35 When the blood does not flow out, the physician should rub cardamom and camphor on the opening of the boil with three or four or all among crêpe ginger (*Cheilocostus speciosus*), butterfly gardenia (*Ervatamia*

coronaria Stapf), velvet-leaf, deodar, embelia, leadwort, the three spices (black pepper, long pepper, and dry ginger), āgāradhūma, turmeric, sprouts of purple calotropis, and fruit of the Indian beech, according to availability, with excessive salt. By doing so, the blood flows out properly.

- 36 When there is an excessive flow of blood, the physician should sprinkle the opening of the boil with dry powders of lodh tree, liquorice, beautyberry, pattāṅga, red chalk, elixir salve, seashell, barley, green gram, wheat, and resin of the Sāla tree, and then press it with the tip of a finger. One should tightly bind it with powdered barks of Sāla, white dammer tree, arjun, white babool, granthi, axlewood, and dhanvāna (Camelthorn), or a linen cloth<sup>77</sup>, or vadhyāsita, or bone of cuttlefish, or powdered lac, along with the binding materials mentioned. After the piercing, the physician should pierce it again. The physician should serve cool clothing, food, a dwelling place, a bath, cooling ointments, and plastering. Or, one can cauterize it with heat. Or, as mentioned, one should give a decoction of kākolī, etc. sweetened by sugar and honey to drink. Or, one should consume the blood of black buck, deer, ram, buffalo, rabbit, or pig, accompanied by milk, green gram soup and meat soup<sup>78</sup>. The physician should treat the pains as mentioned.

36a Here are verses about this.

- 37ab-cd *When blood flows out due to the decay of body tissue, fire becomes weak<sup>79</sup> and the wind becomes highly agitated because of that endeavour.*
- 38ab-cd *The physician should serve the patient food that is not very cold, light in digestion, unctuous, increases blood, slightly sour or not sour at all.*
- 39ab-cd *This is the four-fold method of hindering blood: joining, coagulation, haemostasis. and cauterization.*
- 40ab-cd *The astringent substance joins the opening, the cold substance coagulates the blood, the ash stops the blood, and cauterization contracts the blood vessel.*
- 41ab-cd *If the blood does not coagulate, the physician should employ joining.*

77 Su 1938: 66 has क्षौमेण वा ध्मापितेन - "with linen reduced to ashes". Presumably, it is this ash that is also referred to in item 40.

78 Based on Ḍalhaṇa's comment as found in Su 1938: 66

79 This refers to the digestive fire.

- If the blood does not stop by joining the opening then he should employ haemostasis.*
- 42ab-cd *The physician should endeavour by employing these three methods according to the procedure. If these methods are unsuccessful then cauterization is highly desirable.*
- 43ab-cd *If the blood remains impure, the disease does not aggravate. The physician should then make the blood pure<sup>80</sup> and not drain blood in excess.*
- 44ab-cd *Blood is the basis of the body. It is sustained by blood only.*
- 44ef *Blood is called life. One should therefore save blood.*
- 45ab-cd *If the air in the person who underwent blood-letting is aggravated due to a cold shower, etc., the swelling with pricking pain should be sprinkled with lukewarm clarified butter.*

Can't be  
"sedation"

<sup>80</sup> Ḍalhaṇa comments (Su 1938: 66) that one should purify the blood again by sedation, etc.



# Sūtrasthāna 16: Repairing Pierced Ears

## Previous literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.<sup>81</sup> A book on this topic, arising out of the present project, with edition, translation and discussion of the Nepalese transmission is published by **wuja-2023**.

## Translation

1 Now we shall expound the method for piercing the ear.<sup>82</sup>

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<sup>81</sup> [HIML](#): IA, 211–212317.

<sup>82</sup> The topic of piercing the ear (*kaṇavyadha*) is not discussed in the *Carakasamhitā* ([HIML](#): IB, 326, n. 175), but it is mentioned in some texts that followed the *Suśrutasamhitā*, such as the *Kaśāpyasamhitā* ([HIML](#): IIA, 30). Also, the instrument for piercing the ear is described in the *Aṣṭāṅgaśāstrīdayasamhitā* 1.26.26 ([Ah 1939](#): 321). In the versions of the text known to Ḍalhaṇa ([Su 1938](#): 76) and Cakrapāṇidatta ([acar-1939](#)), the heading of this chapter is “the method of piercing and joining the ear” (कर्णव्यधबन्धविधि), instead of the Nepalese version’s “the method of piercing the ear” (कर्णव्यधविधि). The topic of joining the ear (कर्णबन्ध) is discussed in passages 17–20 of the Nepalese version. However, it appears that only subsequent redactors reflected its importance by including it in chapter headings.

The Nepalese version also omits the opening remark on Dhanvantari that appears in subsequent versions of the text. For a discussion of the frame story in the Nepalese version, see [birc-2021](#).

When commenting on this statement, Ḍalhaṇa ([Su 1938](#): 76) and Cakrapāṇidatta ([acar-1939](#)) observed that only the ears of healthy people should be pierced, and they quoted the lost authority Bhoja to affirm this: “When piercing the ears of children

- 2 One may pierce a child's ears for the purpose of preserving and decorating. During the bright fortnight, when the child is in the sixth or seventh month, on renowned days, half days, hours and constellations, the physician, with a calming presence, sits the boy, who has received a benediction and the recitation of a blessing,<sup>83</sup> on the lap of a wet-nurse.<sup>84</sup> Then, he should pull the ear with his left hand and pierce straight through with his right hand at a naturally-occurring cleft.<sup>85</sup> For a boy, do the right ear first; for a girl, do the left one. Use a needle on a thin ear; an awl on a thick one.<sup>86</sup>
- 3 One may know that it was pierced in the wrong place if there is excess blood or too much pain. The absence of side-effects is a sign that it has been pierced in the right place.<sup>87</sup>

who are free of disease at these times, their ear flaps and apertures, as well as limbs, increase" (1.16.1 (Su 1938: 76)).

Some texts use the adjective कर्ण-वेधनी rather than व्यधनी.

- 83 The causative form व्यधयेत् is known in Classical Sanskrit (**whit-root**). The compound कृतमङ्गलस्वस्तिवाचनं "who has received a benediction and the recitation of a blessing" is an emendation based on the similar text at 3.2.25 (Su 1938: 346). Cf. also 3.10.8, 24 (Su 1938: 388, 390) that have slightly different formulations.
- 84 The versions of 1.16.3 known to Cakrapāṇidatta (**acar-1939**) and Ḍalhaṇa (Su 1938: 76) have the additional compound कुमारधराङ्के ("on the lap of one who holds the child") after धात्र्यङ्के. The gender of कुमारधर is made clear by Ḍalhaṇa's gloss "a man who holds the child." Also, both versions add बालक्रीडनकैः प्रलोभ्य ("having enticed with children's toys") to indicate that the child should be tempted with toys to stay on the assistant's lap. According to Ḍalhaṇa on 1.16.3 (Su 1938: 76), the toys include replica elephants, horses, bulls and parrots. Ḍalhaṇa further mentions that others read भक्ष्यविशेषैर्वा ("or by special treats") before बालक्रीडनकैः, but we see no trace of these small kindnesses in our witnesses.
- 85 The versions of 1.16.3 of Cakrapāṇidatta (**acar-1939**) and Ḍalhaṇa (Su 1938: 76) add that this naturally-occurring cleft is illuminated by a ray of sunshine (आदित्यकरावभासिते). The syntax of this slightly long sentence is unusual because of the dual object तौ "the two (ears)" at the start of the sentence, which is remote from the main verb. The other singular accusatives referring to the ear being pierced are governed by absolutes.
- 86 Ḍalhaṇa on 1.16.3 (Su 1938: 76) clarifies that the awl is a shoe-maker's knife for piercing leather. He also cites the authority of "the notes of Lakṣmaṇa" (*Lakṣmaṇa-ṭippaṇaka*) on the issue of the thickness of the needle. *The Notes of Lakṣmaṇa* is not known from any earlier or contemporary sources and was presumably a collection of glosses on the *Suśrutasamhitā* that was available to Ḍalhaṇa in twelfth-century Bengal. See Meulenbeld (HIML: IA, 386).
- 87 At this point, MS Kathmandu KL 699 is missing a folio, so the rest of this chapter is



- 4 In this context, if an ignorant person randomly pierces a duct there will be fever, burning, swelling, pain, lumps, paralysis of the nape of the neck, convulsions, headache or sharp pain in the ear.<sup>88</sup>
- 5 Having removed the wick (*vartti*) because of the accumulation of humours or an unsatisfactory piercing at that location,<sup>89</sup> he should smear it with barley, liquorice, *Indian madder*, and the root of the *castor oil tree*, thickened with honey and ghee. And when it has healed well, he should pierce it again.<sup>90</sup>
- 6 He should treat the properly-pierced ear by sprinkling it with raw sesame oil. After every three days one should make a thicker wick and do the very same sprinkling.<sup>91</sup>
- 7 Once the ear is free from humours or side-effects, one should put in a light dilator (*pravardhanaka*) in order to enlarge it enough.<sup>92</sup>

constructed on the basis of witnesses MS Kathmandu NAK 5-333 and MS Kathmandu NAK 1-1079.

- 88 This passage is significantly augmented in Cakrapāṇidatta's and Ḍalhaṇa's versions, to outline the specific problems caused by piercing three ducts called कालिका, मर्मिका and लोहितिका (1.16.4 (*acar-1939*) and 1.16.5 (*Su 1938*: 77) respectively). In fact, the order of the problems mentioned in the Nepalese version has been retained in the other versions and divided between each duct. Cakrapāṇidatta's commentary on 1.16.4 (*acar-1939*) cites several verses attributed to Bhoja on the problems caused by piercing these three ducts in the ear flap: 'लोहितिका, मर्मिका and the black ones are the ducts situated in the earflaps. Listen in due order to the problems that arise when they are pierced. Paralysis of the nape of the neck and convulsions, or sharp pain arise from piercing लोहितिका. Pain and lumps are thought to arise from piercing मर्मिका. Piercing कालिका gives rise to swelling, fever and burning.'
- 89 In addition to these reasons, Ḍalhaṇa at 1.16.6 (*Su 1938*: 77) added "because of piercing with a painful, crooked and unsatisfactory needle" (क्लिष्टजिह्वाप्रशस्तसूचीव्यधात्) and "because of a wick that is too thick" (गाढतरवर्तित्वात्). Ḍalhaṇa was aware of the reading in the Nepalese version because in his commentary on 1.16.6 (*Su 1938*: 77) he noted that some read "because of the accumulation of humours" rather than "because of piercing with a painful, crooked and unsatisfactory needle or because of a wick that is too thick." On the concept of humoral accumulation (*samudāya*), see the important analysis by *meul-1992*.
- 90 The description of the drug is ambiguous: the word "root" could be taken with each plant, or just with the last. The vulgate reads just "castor oil root" so we assume that is the traditional interpretation.
- 91 Describing ear and nose operations similar to those here, Celsus described the use of a quill (Latin *pinna*) where the Sanskrit authors use a cotton wick (*De Medicina* VII ¶10–11, *spen-1935*).
- 92 Cakrapāṇidatta on 1.16.6 (*acar-1939*) and Ḍalhaṇa on 1.16.8 (*Su 1938*: 77) pointed out that the dilator can be made of wood, such as that of the *prickly chaff-flower*, the *neem*

- 8 A person's ear enlarged in this way can split in two, either as a result of the humours<sup>93</sup> or a blow.

*Listen to me about the ways of joining it can have.*

- 9 Here, there are, in brief, fifteen ways of mending the ear flap.<sup>94</sup> They are as follows: Rim-join (*nemīsandhānaka*), Lotus-splittable (*utpalabhedyaka*), Dried Flesh (*vallūraka*), Fastening (*āsaṅgima*), Cheek-ear (*gaṇḍakarṇa*), Take away (*āhārya*), Ready-Split (*nirvedhima*), Multi-joins (*vyāyojima*), Door-hinge (*kapāṭasandhika*), Half door-hinge (*ardhakapāṭasandhika*), Compressed (*saṃkṣipta*), Reduced-ear (*hīnakarṇa*), Creeper-ear (*vallīkarṇa*), Stick-ear (*yaṣṭīkarṇa*), and Crow's lip (*kākauṣṭha*).<sup>95</sup>

In this context, among these,

Rim-join:	both flaps are wide, long, and equal.
Lotus-splittable:	both flaps are round, long, and equal.
Dried flesh:	both flaps are short, round, and equal.
Fastening:	one flap is longer on the inside.
Cheek-ear:	one flap is longer on the outside. <sup>96</sup>
Take-away:	the flaps are missing, in fact, on both sides.
Ready-split:	the flaps are like a dais ( <i>pīṭha</i> ).
Multi-joins:	one flap is small, the other thick, one flap is equal, the other unequal.
Door-hinge:	the flap on the inside is long, the other is small.
Half door-hinge:	the flap on the outside is long, the other is small.

tree and tree cotton. Ḍalhaṇa added that it can also be made of lead and should have the shape of the *datura* flower. The manuscripts have variant readings for लघुप्रवर्धनकमामुञ्चेत् at this point that include a scribal emendation, none of which construe plausibly. It is possible that the unusual verb form आ+√मुच् puzzled the scribes and caused the implausible scribal readings and emendations.

- 93 Ḍalhaṇa on 1.16.9 (Su 1938: 77) notes that the word दोष here can refer to either a humour, such as wind, as we have understood it, or a disease generated from a humour.
- 94 The Nepalese version uses the word सन्धान to refer to joining a split in an ear flap, which is consistent with the terminology in the verse cited above (8). However, 1.16.10 of Ḍalhaṇa's version (Su 1938: 77) uses the term बन्ध here and at the very beginning of the chapter (i.e., 1.16.1) to introduce the topic of repairing the ear.
- 95 For an artist's impression of these different kinds of joins in the ear flap, see majn-1975 (reproduced as Figure 3.2 in wuja-2003).
- 96 For an artist's impression of this join, see majn-1975 (reproduced as Figure 3.3 in wuja-2003).

These ten options for joins of the ear should be bound. They can mostly be explained as resembling their names.<sup>97</sup> The five from compressed (*saṃkṣipta*) on are incurable.<sup>98</sup> Among these, “Compressed” has a dry ear canal and the other flap is small. “Reduced ear” has flaps that have no base and have wasted flesh on their edges. “Creeper-ear” has flaps that are thin and uneven. “Stick-ear” has lumpy flesh and the flaps are stretched thin and have stiff ducts. “Crow-lip” has a flap without flesh with compressed tips and little blood. Even when they are bound up, they do not heal because they are hot, inflamed, suppurating, or swollen.<sup>99</sup>

- 10 A person wishing to perform a join of any of these should therefore have supplies specially prepared according to the recommendations of the “Preparatory Supplies” chapter.<sup>100</sup> And in this regard, he should particularly gather<sup>101</sup> top layer of fermented liquor, milk, water, fermented rice-water, and powdered earthenware crockery (*kapālacūrṇa*).<sup>102</sup>

97 Cakrapāṇidatta on 1.16.9–13 (*acar-1939*) and Ḍalhaṇa on 1.16.10 (*Su 1938*: 77–78) provide examples of how the names of these joins describe their shapes. For example, the rim-join (*nemīsandhānaka*) is similar to the join of the rim of a wheel (*cakradhārā*).

98 Ḍalhaṇa on 1.16.10 (*Su 1938*: 77–78) mentions that some do not read the statement that only five are incurable, and they understand the causes of unsuccessful joins given below (i.e., heat, inflammation, suppuration and swelling) as also pertaining to the first ten when they do heal.

99 The version of 1.16.11–13 known to Ḍalhaṇa (*Su 1938*: 78) has four verses (श्लोक) at this point that are not in the Nepalese manuscripts. The additional verses iterate the types of joins required for ear flaps that are missing, elongated, thick, wide, etc. All four verses were probably absent in the version of the *Suśrutasaṃhitā* known to Cakrapāṇidatta. He cites the verses separately in his commentary, the *Bhānumatī* (*acar-1939*), introducing each one as ‘some people read’ (के चित्पठन्ति). However, in Trikamajī Ācārya’s edition of the *Sūtrasthāna* of the *Bhānumatī*, the root text is largely identical to the one commented on by Ḍalhaṇa (*Su 1938*), even in instances like this where Cakrapāṇidatta’s commentary indicates that he was reading a different version of the *Suśrutasaṃhitā*. See further the discussion on p. ?? above.

100 *Suśrutasaṃhitā* 1.5 (*Su 1938*: 18–23), probably verse 6 especially, that lists the equipment and medications that a surgeon should have ready.

101 The reading in the Nepalese manuscripts of विशेषतश्चाग्नोपहरणीयात् has been emended to विशेषतश्चात्रोपहरेत् to make sense of the list of ingredients, which is in the accusative case. Also, the repetition of अग्नोपहरणीयात् in the Nepalese version suggests that its second occurrence, which does not make good sense here, is a dittographic error.

102 The term कपालचूर्ण is unusual. Ḍalhaṇa (*Su 1938*: 79) defines it as the powder of fragments of fresh earthen pots and Cakrapāṇidatta (*acar-1939*) as the powder of earthenware vessels.

Next, having made the woman or man tie up the ends of their hair, eat lightly and be firmly held by qualified attendants, the physician considers the joins and then applies them by means of cutting, splitting, scarification, or piercing.<sup>103</sup> Next, he should examine the blood of the ear to know whether it is tainted or not. If it is tainted by wind, the ear should be bathed with *fermented rice-water* and water; if tainted by choler, then cold water and milk should be used; if tainted by phlegm, then *top layer of fermented liquor* and water should be used, and then he should scarify it again.

After arranging the join in the ear so that it is neither proud, depressed, nor uneven, and observing that the blood has stopped, one should anoint it with honey and ghee, bandage each ear with *tree cotton* and gauze (*plota*), and bind it up with a thread, neither too tightly nor too loosely. Then, the physician should sprinkle earthenware powder on it and provide medical advice (*ācārika*). And he should supplement with food as taught in the “Two Wound” chapter.<sup>104</sup>

- 11 *One should avoid rubbing, sleeping during the day, exercise, overeating, sex, getting hot by a fire, or the effort of speaking.*
- 12 One should not make a join when the blood is too pure, too copious, or too thin.<sup>105</sup> For when the ear is tainted by wind, then it is obstructed by blood, unhealed and will peel. When tainted with choler, it becomes pinched (*gāḍha*), septic and red. When tainted by phlegm, it will be stiff and itchy. It has excessively copious suppuration and is swollen. It has a small amount of wasted (*kṣīṇa*) flesh and it will not grow.<sup>106</sup>
- 13 When the ear is properly healed and there are no complications, one may very gradually start to expand it. Otherwise, it may be inflamed (*saṃrambha*), burning, septic or painful. It may even split open again.

<sup>103</sup> There are syntactic difficulties in this sentence. We have adopted the reading in Ḍalhaṇa’s version (Su 1938: 78), which has च कृत्वा following सुपरिगृहीतं. It is likely that a verb, such as कृत्वा, dropped out of the Nepalese transmission.

<sup>104</sup> *Suśrutasamhitā* 4.1 (Su 1938: 396–408).

<sup>105</sup> 1.16.17 of Ḍalhaṇa’s version (Su 1938: 79) reads “impure” for the Nepalese “too pure,” which would appear to make better medical sense. Emending the text to नाशुद्ध- for नातिशुद्ध- in the Nepalese version would yield the same meaning as Ḍalhaṇa’s version.

<sup>106</sup> In his edition of *Suśrutasamhitā*, Ācārya (Su 1938: 79 n. 1) includes in parentheses the following treatment for these conditions, which according to a footnote is not found in the palm-leaf manuscript he used: ‘One should sprinkle it with raw sesame oil for three days and one should renew the cotton bandage after three days’ (आमतैलेन त्रिरात्रं परिषेचयेत्त्रिरात्राच्च पिचुं परिवर्तयेत्).

- 14 Now, massage for the healthy ear, in order to enlarge it.  
One should gather as much as one can the following: a [monitor lizard](#), scavenging and seed-eating birds, and creatures that live in marshes or water,<sup>107</sup> fat, marrow, milk, and sesame oil, and white mustard oil.<sup>108</sup> Then cook the oil with an admixture of the following: [purple calotropis](#), [white calotropis](#), [heart-leaf sida](#), [country mallow](#), [country sarsaparilla](#), [Indian kudzu](#), [liquorice](#), and [hornwort](#).<sup>109</sup> This should then be deposited in a well-protected spot.
- 15 *The wise man who has been sweated should rub the massaged ear with it. Then it will be free of complications, and will enlarge properly and be strong.*<sup>110</sup>
- 16 *Ears which do not enlarge even when sweated and oiled, should be scarified at the edge of the hole, but not outside it.*<sup>111</sup>
- 17 *In this tradition, experts know countless repairs to ears. So a physician who is very intent on working in this way may repair them.*<sup>112</sup>

<sup>107</sup> For such classifications, see the analyses by [zimm-1999](#) and [smit-1994](#).

<sup>108</sup> Ḍalhaṇa's version of 1.16.19 ([Su 1938](#): 79) includes ghee. However, Ḍalhaṇa's remarks on this passage and Cakrapāṇidatta's on 1.16.18 ([acar-1939](#)) indicate that they knew a version of this recipe, perhaps similar to the Nepalese one, that did not include ghee. Ḍalhaṇa also noted that others simply read four oils, beginning with fat and without milk, whereas Cakrapāṇidatta said that some say it is made with four oils and milk.

<sup>109</sup> The version of of this verse known to Ḍalhaṇa (vulgate ([Su 1938](#): 79)) adds several ingredients to this admixture, including [prickly chaff-flower](#), [Withania](#), [milk-white](#), [sweet plants](#) and [Indian ipecac](#). Also, it has [beggarweed](#) instead of [Indian kudzu](#). When commenting on 1.16.19, Ḍalhaṇa ([Su 1938](#): 79) noted that some do not read [sweet plants](#) and [Indian ipecac](#). Therefore, at his time there were other versions of this recipe circulating, with fewer ingredients, as seen in the Nepalese version.

<sup>110</sup> For these aims (i.e., healing and enlarging the ear), the text known to Ḍalhaṇa ([Su 1938](#): 79) had an additional verse and a half describing an ointment for rubbing the ear and [sesame oil](#) cooked with various medicines for massage. Cakrapāṇidatta ([acar-1939](#)) did not comment on these verses, nor verse 15 of the Nepalese version, and so the version of the *Suśrutasaṃhitā* known to him may not have included them.

<sup>111</sup> Ḍalhaṇa's version of 1.16.23 ([Su 1938](#): 79–80) added another hemistich that stated more explicitly that the scarification should not be done on the outside of hole as it will cause derangement.

<sup>112</sup> After verse 17, the 1938 edition of Ācārya ([Su 1938](#): 80) has in parentheses nineteen verses on diseases of the ear lobes, treatments and complications. It is possible that these verses were in some of the witnesses used by Ācārya to construct the text as they occur in other manuscripts, such as MS Hyderabad Osmania 137-3(b). However, Cakrapāṇidatta ([acar-1939](#)) and Ḍalhaṇa ([Su 1938](#): 80) stated that some read about the diseases of the ear lobes in this chapter whereas others read about them in the chapter on various treatments (*miśrakacikitsa*) (SS 5.25), which does indeed begin

- 18 If an ear has grown hair, has a nice hole, a firm join, and is strong and even, well-healed, and free from pain, then one can enlarge it slowly.<sup>113</sup>
- 19 Now I shall describe the proper method of making a repair when a nose is severed. First, take from the trees a leaf the same size as the man's nose and hang it on him.
- 20 Next, having cut a slice of flesh (vadhra),<sup>114</sup> with the same measurements, off the cheek, the end of the nose is then scarified.<sup>115</sup> Then the undistracted physician, should quickly put it back together so that it is well joined.
- 21 Having carefully observed that it has been sewn up properly, he should then fasten it along with two tubes.<sup>116</sup> Having caused it to be raised,<sup>117</sup> the powder of sappanwood,<sup>118</sup> liquorice and Indian barberry should be sprinkled on it.<sup>119</sup>
- 22 The wound should be covered properly with tree cotton and should be moistened repeatedly with sesame oil. Ghee should be given to the man to drink. His digestion being complete, he should be oiled and purged in accordance with the instructions specific to him.<sup>120</sup>

with a discussion of the disease परिपोट. Ḍalhaṇa went on to say that some believe that these verses were not composed by sages and, therefore, do not read them.

- 113 The order of verses 17 and 18 is reversed in Ḍalhaṇa's version (Su 1938: 80).
- 114 The version of 1.16.28b known to Ḍalhaṇa (Su 1938: 81) reads "bound, connected (bad-dham)" instead of "slice of flesh (vadhra)." This is a critical variant from the surgical point of view. If the slice remains connected, it will have a continuing blood supply. This is one of the effective techniques that so astonished surgeons witnessing a similar operation in Pune in the eighteenth century (wuja-2003).
- 115 Or 1.16.20 could be mean, '... off the cheek, it is fixed to the end of the nose, which has been scarified.' Unfortunately, the Sanskrit of the Nepalese version is not unambiguous on the important point of whether or not the flap of grafted skin remains connected to its original site on the cheek. However, Ḍalhaṇa (Su 1938: 81) clarified the meaning of the vulgate here by stating that one should supply the word "flesh" when reading "connected," thus indicating that he understood the flesh to be connected to the face.
- 116 Ḍalhaṇa noted that the two tubes should be made of reed or the stalk of the leaf of the castor-oil plant (on 1.16.21 (Su 1938: 81)). They should not be made of lead or betel nut because the weight will cause them to slip down.
- 117 The Sanskrit term उन्नामयित्वा in 1.16.21 is non-Pāṇinian.
- 118 For पत्ताङ्ग (sappanwood), there are manuscript variants पत्ताङ्ग (MS Kathmandu NAK 5-333) and पत्तङ्ग (MS Kathmandu NAK 1-1079). Also, MS Kathmandu KL 699 (f. 14r:1) has पत्ताङ्ग in a verse in 1.14 (cf. 1.14.36 (Su 1938: 66)). The text known to Ḍalhaṇa has पत्तङ्ग (1.16.29 (Su 1938: 81)) and this term is propagated in modern dictionaries.
- 119 Ḍalhaṇa glossed अञ्जन as रसाञ्जन, elixir salve (Su 1938: 81).
- 120 The expression स्वयथोपदेश is ungrammatical but supported in all available witnesses.

- 23 *And once healed and really come together, what is left of that slice of flesh (vadhra) should then be trimmed.<sup>121</sup> If it is reduced, however, one should make an effort to stretch it, and one should make its overgrown flesh smooth.<sup>122</sup>*

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121 The vulgate transmission has lost the word वध्र and replaced it with अर्ध “half,” which makes little sense in this surgical context.

122 Ḍalhaṇa accepted a verse following this, 1.16.32 (Su 1938: 81), which pointed out that the procedure for joining the nose is similar to that of joining the lips without fusing the ducts. He noted that earlier teachers did not think this statement on the nose and lips was made by sages, but he included it because it was accepted by Jejjāṭa, Gayadāsa and others, although they did not comment on it because it was easy to understand. Cakrapāṇidatta also did not comment on this additional verse (acar-1939).





# Sūtrasthāna 28: Unfavourable Prognosis in Patients with Sores

## Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.<sup>123</sup>

gosw-2011 studied the commentaries of Ḍalhaṇa and Cakrapāṇidatta on this and the following adhyāyas up to 32, focussing on the topic of omens (*ariṣṭa*). He concluded that both authors were influenced by the Indriyasthāna of the *Carakasaṃhitā* in their commentaries on this topic.<sup>124</sup>

## Translation

- 1 Thus, living creatures and their strength, complexion (*varṇa*) and energy (*ojas*) are rooted in food. That (food) depends on the six flavours (*rasa*). Thus, the flavours depend on substance (*dravya*), and substances depend on medicinal herbs. There are two kinds of them (herbs): stationary and mobile.<sup>125</sup>

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<sup>123</sup> HIML: IA, 219.

<sup>124</sup> gosw-2011.

<sup>125</sup> 1.1.28 (*Su* 1938: 7), tr. P. V. Sharma 1999–2001: 1, 21.



# Nidānasthāna



# Nidānasthāna 1: The Diagnosis of Diseases Caused by Wind

## Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.<sup>126</sup>

## Translation

- 1 And now we shall explain the chapter about diagnosis of diseases caused by wind.<sup>127</sup>
- 2
- 3 Suśruta asks after holding the feet of Dhanvantari who is the foremost of the upholders of righteousness and who emerged with nectar.
- 4 O King!<sup>128</sup> Divodāsa<sup>129</sup> the best of the orators! Let us know about the naturalized and disordered form of wind, its places in the body and types of the diseases caused by its contamination.
- 5–9ab On hearing his words, the venerable sage replied that being independent, constant and omnipresent this wind is revealed as self-born and supreme being. It is worshiped by all words and situated in the form of life-force in all beings. It is the cause of origin, continued existence and

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<sup>126</sup> [HIML](#): IA, 234. (**rube-1954b**) studied the wind doctrines in the *Carakasamhitā*.

<sup>127</sup> The present chapter describes the diseases caused by vitiated wind and wind's mixing with other humours. In the medical term it is known as rheumatism.

<sup>128</sup> H and N both mss read भूपते instead of कौपनै: in the vulgate.

<sup>129</sup> <https://doi.org/10.20935/AL2992>

destruction of beings. It is unmanifest though manifests in/through action, cold, dry, light in weight, variable, moving horizontally with two attributes i.e., sound and tangibility<sup>130</sup>. Having all chief qualities which are sattva, rajas and tamas but predominated by rajas. It has inconceivable power. It is inducer of humours<sup>131</sup> and distinguished in the group of diseases<sup>132</sup>. *It moves quickly, moves again and again*, stays in stomach and intestine.

- 9cd Now, listen to the description of wind which moves inside the body.
- 10 Unvitiated wind makes possible objects of senses connect with intellect. It maintains a state of equilibrium between the humours, semen/7 fluids? and Gastric fluid and actions done by body, speech and intellect bring to one's right place.<sup>133</sup>
- 11 Just as the five types of bile have been described based on their name, place and their actions, similarly, one type of air is of five types based on name, place, action and diseases.
- 12 Five types of wind:
1. Vital wind (*prāṇa*)
  2. *udāna*
  3. *samāna*
  4. *vyāna*
  5. *apāna*

above five types of wind remain in their equilibrium and hold the body<sup>134</sup>.

130 According to Ḍalhaṇa, it has power to divide humours, fluids, feces etc. moving inside the body and it is the cause to the disease in the limbs. It carries humours, chyle, semen/7 fluids? and feces further in the body. The wind which is moving outside is holding the earth and body. (सा चास्य शक्तिः शरीरदोषमूत्रपुरीषादिविभागोऽवयवसंस्थानका(क)रणं दोषधातुमलसंवहनादिश्च, शरीराद्धिस्तु संचरतो धरणीधारणादिः Su 1938:257)

131 Ḍalhaṇa suggests नेता=प्रेरक (Su 1938:257)

132 Ḍalhaṇa suggests राट्=राजते not राजा

133 According to Ḍalhaṇa, सम्पत्तिः=सम्पन्नता at 1.6.3 (Su1938:23). Ḍalhaṇa commented that Gayadāsa reads 'इन्द्रियार्थोपसंप्राप्तिः' but not written here because of being detailed. (गयदासाचार्यस्तु इमं श्लोकं 'इन्द्रियार्थोपसंप्राप्तिः' इत्यादि कृत्वा पठति, स च विस्तरभयान्न लिखितः) But H and N MSS suggest 'इन्द्रियार्थोपसम्पत्तिः'

134 Ḍalhaṇa suggests स्थान=साम्य, यापयन्ति=धारयन्ति (The manuscripts all read प्राणोदानः समानश्च व्यानोपानस्तथैव च . against the vulgate's प्राणोदानौ समानश्च व्यानश्चापान एव च . I think प्राणोदानौ, व्यानापानौ or व्यानश्चापान एव च should be read)

- 13–14ab The wind that flows through the mouth is called the vitality (prāṇa), which holds the body. It propels down food inside the stomach and engages with the gastric fluid<sup>135</sup>. Unvitiated Vital wind mostly causes hiccups, asthma etc. diseases.
- 14cd–15 The wind which flows upwards in the body, the best among all five winds is called udāna. Singing, speech etc. individual things done by the same wind. Unvitiated udāna wind mostly causes diseases above the collar bone e.g., nose, eyes, head and ears<sup>136</sup>.
- 16–17ab The samāna wind flows in stomach and duodenum. It helps gastric fluids in the digestion of food and separates the substances produced from it e.g., chyle, impurities, urine and feces. Unvitiated samāna wind causes diseases like a chronic enlargement of spleen (gulma), weak digestion, and diarrhea.
- 17cd–18 The vyāna wind moves inside the whole body and circulates chyle and expels sweat and blood outside the body. It helps in the movements of limbs in every way. Contaminated vyāna wind causes all diseases occurring in the body.
- 19–20ab Staying in the abdomen, the apāna wind propels wind of body, feces, urine, semen, womb and menstruation to come out of the body at their proper time. Contaminated apāna wind causes terrible diseases that occur in the bladder and anus.
- 20cd–21ab Contaminated vyāna and apāna wind causes defect of semen and gonorrhea, while simultaneous contamination of all the five winds surely leads to death.
- 21cd–22ab I shall therefore describe all the diseases caused by the contamination of winds staying in the various places of the body.
- 22cd–24ab Contaminated wind in the stomach causes disease like vomiting, loss of consciousness, fainting, thirst, heart-seizure, pain in lateral sides of stomach. It also causes rumbling of the bowels, acute pain, inflated belly, pain while discharging urine and feces, suppression of urine and pain in the loins.
- 24cd Contaminated wind residing in the ear causes loss of function of the senses.

<sup>135</sup> Ḍalhaṇa suggests head, chest, throat and nose as locations of prāṇa. (Sus1938:259)  
Gayadāsa suggests अग्नि for प्राण.

<sup>136</sup> Ḍalhaṇa suggests it also causes diseases like cough etc. (चकारादन्यादपि प्राणोदानौ, व्या-  
नापानौ कासादीन् करोति .)

- 25–29 Residing in the skin,<sup>137</sup> contaminated wind causes discoloration of skin, throbbing of parts of the body, dryness, numbness, itching, pricking pain, swelling. It being inherent in the flesh of body causes swelling with pain and being inherent with the fat of the body causes swelling with slight pain but do not become wound.<sup>138</sup>
- Residing in the artery it causes acute pain, contraction and filling up of the artery.<sup>139</sup> It stuns, vibrates and destroys<sup>140</sup> the muscle tissues by residing in the muscle. Residing in the joints it causes pain and swelling. Residing in the bone it causes fracture and dryness of bones which also cause to acute pain and, in the marrow, it dries up marrow which may never be cured. Residing in the semen it causes non-production and distorted production of semen.<sup>141</sup>
- 30–31ab Contaminated wind moves from the hand, foot, head, then it may be omnipresent or pervade the entire body of men and causes stiffness, convulsion, numbness and acute pain.
- 31cd–32ab Wind (5 types) mixed with other doṣas (bile etc.) in the places mentioned above produces mixed types of pains.
- 34cd–35ab Prāṇa wind surrounded by bile causes vomiting and burning sensation, by phlegm it causes weakness, exhaustion, laziness and bad taste.
- 35cd–36ab Udāna wind surrounded by bile causes loss of consciousness, stupor, dizziness and fatigue, by phlegm it causes absence of perspiration, slowness of digestion, sensation of coldness.
- 36cd–37ab Samāna wind surrounded by bile causes perspiration, a burning sensation, heat and stupor, association with phlegm it causes erection in urine, feces and limbs.
- 37cd–38ab Apāna wind associated with bile causes a burning sensation, heat and the voiding of blood with urine, with phlegm it causes a feeling of heaviness in the lower part of the body and coldness.

<sup>137</sup> Ḍalhaṇa and Gayadāsa both suggest त्वक्=रस. Gayadāsa explained that chyle stays in the skin and therefore, in the verse त्वक्स्थ should be read as रसस्थ as we read secondary meaning in the sentences like गङ्गायां घोषः.

<sup>138</sup> The MS H does not read व्रणांश्च रक्तगो ग्रन्थीन् सशूलान् मांससंश्रितः . against the vulgate. (Su 1938: 261).

<sup>139</sup> According to Ḍalhaṇa सिराकुञ्चनं is also known as कुटिला सिरा (Su 1938: 262)

<sup>140</sup> Ḍalhaṇa and Gayadāsa both suggest the meaning of हन्ति for being not capable of both stretching and contraction. सन्धिगतः संधीन् हन्ति प्रसारणाकुञ्चनयोरसामर्थ्यं करोति (Su 1938: 262) ...

<sup>141</sup> Ḍalhaṇa and Gayadāsa both suggest that a distorted production विकृतां प्रवृत्तिम् is too fast, too slow, knotty and discolored.



- 38cd–39ab Vyāna wind surrounded by bile causes a burning sensation, tossing of the limbs and fatigue, by phlegm it causes stiffening limbs, uddaṇḍaka? and pain in the swelling.
- 40–41 Persons who are of delicate nature, follow faulty diet and lifestyle, ? also afflicted with intoxicating drinks, sexual enjoyment, exercise causes vitiation of wind and blood.??
- 42 Riding elephant, horse and camel, lifting great weights, consuming vegetables which are pungent, hot, sour, alkali and being frequently distressed situation causes contamination of wind.
- 43–44 Blood flowing in the body blocks the passage of contaminated wind which moves quickly in the body. Excessively irritated wind–being contaminated by wind and dominance of wind, it is called वातरक्त Gout<sup>142</sup>.
- 45–46 Vātarakta causes – pricking pain, dryness, loos of sensation in the feet. Contaminated Bile mixed with blood causes sharp burning sensation, excessive heat and soft swelling with red color in the feet. Contaminated Phlegm mixed with the blood causes itching in the feet. It makes feet white, cold, dry, thick and hard. All defects <sup>143</sup> in the blood contaminated by humours (wind, bile, phlegm) manifest their symptoms in the feet.
- 48 This disease spreads all over the body like rat poison by staying in feet or sometimes hands.
- 49 Gout spreads in the knee and the skin bursts and starts bleeding makes it incurable. It is mitigatable if it is of a year's old.
- 50–51 When vitiated wind enters in the all arteries it causes quickly convulsions again and again and because of frequent contractions (*ākṣepa*) it is called convulsions (*ākṣepaka*).
- 52–56 Because in this situation a person often sees darkness and fall, it calls spasmodic contraction (*apatānaka*) <sup>144</sup> . If wind mixed with phlegm stays excessively in the arteries, it stiffens body like a staff and it is called दण्डापतानकः epilepsy with convulsions. Vitiated wind entered in the arteries and bends the body like a bow, it is called धनुःस्तम्भ Tetanus.

142 In the medical term वातरक्त is known as Gout. Cakrapāṇi called it आढ्यरोगः Caraka-saṃhitā sū.14.18 and ci.28.66

143 Gayadāsa suggests सर्वे दुष्टाः शोणितं चापि nominative plural instead of locative singular.

144 Gayadāsa accepted the Nepalese reading ताम्यते which vulgate does not read. Gayadāsa gives definition of अपतानक as येनापताम्यते means a situation in that a person sees the dark.

When vitiated wind accumulated in the regions of finger, ankle, abdomen, heart, chest, and throat swiftly attack on the group of vain and ligaments, it gets a person's eyes stuck, chin stuns, side breaks and vomiting phlegm he moves inwards like a bow and this situation is known as emprosthotonos (*antarāyāma*). When vitiated wind attacks on outside ligaments, body of a person will stretch forward like a bow. In this situation, if the chest, hip or thigh break, wise men call it incurable.

- 58 Aggravated phlegm and bile mixed with wind or only vitiated wind causes fourth convulsive disease due to trauma.
- 59 Convulsions due to miscarriage, excessive bleeding, and injury are incurable <sup>145</sup>.
- 60–62 When excessively agitated and strong wind flows in the arteries which spread downward, upward, and sideways, it loses the joints and kills the other side of body. The best of physicians calls it paralysis (*pakṣāghāta*). <sup>146</sup> Then half of his entire body becomes inefficient and unconscious. Afflicted by wind he suddenly falls or dies.
- 62.1 Bile integrates with wind causes burning sensation, affliction, and infatuation. When it integrates with phlegm causes coldness, morbid swelling, and heaviness. <sup>147</sup>.
- 63 A paralysis (*pakṣāghāta*) caused by wind <sup>148</sup> is curable with most difficulty. It becomes curable when caused by bile and phlegm mix with the wind. It becomes incurable when caused by the loss of bodily constituents.
- 64–66 Verses from 64–66 are not found in the Nepalese manuscripts. These verses discuss the term spasmodic contradiction (*āpatantraka*) which is the same as अपतानक. Ḍalhaṇa commented on ni.1.64–66 (Su 1938:267) that because of having the similar condition in both situations, some scholars do not read the अपतन्त्रक. In the verse ni.1.59 Ḍalhaṇa commented that the आक्षेपक and अपतानक is same (Su 1938:266) and again

<sup>145</sup> According to Ḍalhaṇa convulsion (*ākṣepaka*) is also known as अपतानक (Su 1938:266). He further mentions that even if fortunately, it is cured, it cripples the limb.

<sup>146</sup> In the ca.6.28.55 पक्षाघात is described as monoplegia (*ekāṅgaroga*). In that case it damages one of the limbs. In the medical terms paralysis (*apakṣāghāta*) is known as hemiplegia.

<sup>147</sup> This verse is not available in vulgate. It deals with the symptoms when bile and phlegm mix with the wind. It is already discussed in su.2.1.38.

<sup>148</sup> Here the term शुद्धवात suggests the meaning of the wind that is devoid of bile and phlegm.

- he suggested that the अपतानक and अपतन्त्रक both are similar condition. Therefore, आक्षेपक, अपतानक and अपतन्त्रक should be the same. Gaya-dāsa further commented that the Caraka has not read आक्षेपक as अपतानक and therefore described the अपतन्त्रक separately (Su 1938:267).
- 67 This verse also not found in the Nepalese Manuscripts. The verse describes rigidity of neck (*manyāsthambha*). According to Ḍalhaṇa, rigidity of neck is a prior symptom of spasmodic contradiction.
- 68–72 By speaking very loudly, eating hard foods, excessively laughing and yawning, lifting heavy loads and sleeping in an awkward position, vitiated wind lodges into face painfully and produces spasm of the jaw-bones (*ardita*) disease. In that case, half of the face and neck become curved, head trembles, speech hindrances, deformity occurs in the eyes, eyebrows and cheeks.<sup>149</sup> Experts in diseases call this disease spasm of the jaw-bones (*ardita*).
- 73 Spasm of the jawbones cannot be cured when it stays in a person for three years, who is very weak, stays without blinking, trembles, and constantly speaks gibberish.
- 74 Arteries of Heel and toes stricken by vitiated wind prevents stretching of thighs. This disease is known as sciatica (*gr̥dhrasī*).
- 75 Arteries which run to the tips of fingers from behind the roots of the upper arm affected by vitiated wind terminates all activities of arms and back. This disease is called paralysis of arms and back (*viśvañci*).<sup>150</sup>
- 76 Vitiated wind and blood in the joint of knee causes synovitis of knee joint (*koṣṭukaśīrṣa*). In this extremely painful situation, the shape of swelling in knee joints seems like a head of Jackal.
- 77 Vitiated wind resides in the waist attacks on the arteries of thigh causes limpness (*khañja*) and when it attacks on both the thighs a person becomes lame (*paṅgu*).
- 78 A person who trembles at the beginning of walking or walks limping and whose foot joint has become loose is called lathyrism (*kalāyakhañja*).
- 79 Vitiated wind residing in the ankle-joint causes pain when one steps on uneven ground. This disease occurs is called वातकण्टक.

149 Ḍalhaṇa suggests नेत्रादीनाम् इत्यादि शब्दात् भूगण्डादि उपसङ्ग्रहः

150 Both the MSS N and H read विश्वञ्चि instead of the vulgate reading विश्वाची. There is no such word found in other Āyurveda texts.

- 80 Vitiated wind mixed with bile and blood cause burning sensation in feet. It should be declared as burning sensation in feet (*pādādāha*).
- 81 A person whose feet tingle and become insensible due to vitiation of phlegm and wind is called पादहर्ष.
- 82 Vitiated wind lying in the shoulder dries the shoulder joints and it is called अंसशोष. It also bends the arteries of shoulder, and this disease is called अवबाहुक.<sup>151</sup>
- 83 Vitiated wind singly or mixed with phlegm cover the channel of ears causes deafness.
- 84 Vitiated wind saturated with phlegm covering the arteries which conduct the sound of speech makes a person inactive (*akriya*), dumb (*mūka*). He mumbles (*mimmira*) through the nose and stammers (*gadgad*).<sup>152</sup>
- 85 Vitiated wind penetrating into the cheekbones, temporal bones, head and neck causes piercing pain in the ears. It is called ear-ache (*karṇasūla*).<sup>153</sup>
- 86–87 The pain that arises from the bladder or feces goes down as if it were breaking the rectum and..... ? is called तूनी, whereas the pain, rising upward from the rectum extending up to the region of the intestines, is called प्रतितूनी.
- 88–89 Retention of vitiated wind inside abdomen causes distension of the stomach and flatulence and intense pain and rumbling inside, is called tympanites (*ādhmāna*). Vitiated wind mixed with phlegm causes प्रत्या-ध्मान. It rises in the stomach and causes pain in the heart and sides.<sup>154</sup>
- 90–91 A knotty stone-like tumour caused by wind appearing in the stomach having an elevated shape and stretched upward direction which obstructing the passage of faeces and urine should be known as वाताष्टीला. A tumour of similar shape rose obliquely in the abdomen obstructing the passage of wind, faeces and urine should be known as प्रत्यष्टीला.

151 Ḍalhaṇa and Gayadāsa both have defined two diseases i.e., अंसशोष and अवबाहुक respectively.

152 Nepalese Manuscripts read मिर्मिर instead of the Vulgate's reading मिन्मिण. Dictionary of MW suggests the meaning of मिर्मिर = having fixed unwinking eyes which is not relevant to the disease of tongue.

153 In the medical terms, this disease is known as Otitis.

154 There's an addition in MS N. नाभेरधस्तात् संजातः संचारी यदि वाऽचलः

# Śārīrasthāna



# Śārīrasthāna 3: On Conception and the Development of the Embryo

First draft, by Jan Gerris, 2023-12-19.

## Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.<sup>178</sup> **das-2003** also studied topics of this chapter.

## Translation

- 1 We are now about to begin to explain how the embryo is conceived, nestles and develops\* once it arrives in the body.
- 3 Sperm from the male absorbs heat whereas eggs from the female release heat. With respect to this aspect, the way the different basic elements of matter behave depends on how the elements specifically react with one another and how they form bonds with one another.
- 4 The wind aggravates the heat caused by the bodily frictions during sexual intercourse between husband and wife. Hence heat and wind colligate and displace the sperm towards the

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<sup>178</sup> [HIML](#): IA, 247–247.

vagina. There it gets combined with the female element, thanks to the matrimonial fusion of agni and saumya, and is confined towards the uterus, its new realm where it is respectfully known by many names and synonymous descriptions such as he who touches, smells, looks and sees, hears, tastes, as the animating principle of all living beings, as he who wanders, observes and witnesses, the creator, he who remains incomprehensible even though eternal. So it claimed. Because of the connection with the divine, the conceptus subsequently makes its entry into the reproductive organs, where it remains exempt from decay, imperishable and to be meditated upon, the soul of all beings that exist, marked by the concomitance of the three states-of-mind, the sattvic, the rajasic and the tamasic, and of the different Devas and Asuras, enraptured as it is by Vāyu.

- 5 When there is an excess of male sperm, boys originate. When there is an excess of the female element, girls. And when there is a balance between both, the sex of the child remains unclear.\*
- 6 A boy is conceived when on the first day of the period of twelve days of the cycle\* the desire for sexual intercourse is not endlessly postponed. It should not be disregarded that a woman who is definitely pregnant may suffer a miscarriage; a second pregnancy can miscarry as well and even in a third gestation, the body can be incomplete either in form or in number of limbs, and both the strength and the life expectancy can be limited. This is the reason why one should avoid three-nightly intervals. There are also patients who do not exhibit produce menstrual periods or have no sperm production and who do not return to normality.\* For that reason, if sperm production has to be observed, a man should avoid the habit of three-nightly advances. In such cases, even after having observed there periods of twelve nights, yet there is no ovulation proper.\*\* Some state that these are amenorrhoeic.\*\*\*
- 7 Here are some more verses.
- 8 Lacking
- 9 As surely as by rule of nature the night-lotus folds its



- leaves, so truly a woman's yoni by law of nature is also closing\*.
- 9A The face of a woman becomes swollen, lively and because of transudation moist like that of an elephant, she longs for intimate contact with a man, talks sweetly, her belly drooping and her head let down/uncared for,...
- 9B ... her arms, breasts, hips, loins, thighs, her abdomen around the navel, her bottom and buttocks, all are trembling. And she experiences intense happiness and satisfaction, you can tell her a woman after her courses.
- 10 The Vāyu then guides the menstrual discharge that comes after being heaped up for a month through the two channels towards the opening of the yoni.
- 11 Menstruation becomes a regular feat from twelve years onwards and owing to the natural decay of functions it ends from about fifty years onwards.
- 12 So, if a man desires children, he should have intercourse with his wife during the fertile period of the cycle\* and for that particular purpose he should visit her on even days in order to beget a boy and on uneven days for a girl.\*\*
- 13 In this context, fatigue, lassitude, thirst, a feeling of exhaustion in the thighs, flatulence, an arrest of the menses - and of sperm from the yoni\* - with a sensation of shaking heat all suggest that a pregnancy has been obtained very recently.
- 14 Here are some more verses. It is claimed that a typical early sign of pregnancy is the nipples turning darker\*, the appearance, on the midline of the abdomen, of a coloured stripe, (resembling hair)\*\* and sudden vomiting.
- 15 Lacking
- 16 From the very beginning of pregnancy the woman should avoid sexual intercourse, exertion, excessive exercise, sleeping by day and waking at night, being terrified, sitting for too long in one position, being all alone, Sneha-krama and other treatments as well as blood-letting at an inappropriate time.
- 17 Lacking
- 18 So then, in the first month a kalala arises. In the second

month a ghana develops that has arisen thanks to blood, ritual oblations and by wind and has become mature with the five essential elements. If there is a lump-like structure, it will be a male. If the structure is oblong or *peśī*, a girl; if there is a bud-shaped structure or *arbbuda*, an individual with undifferentiated external sexual features.\* In the third month five protrusions (of hands, feet and head) result from the process of development. All limbs and all minor body parts become distinguishable (though still) very minute. In the fourth month all limbs and minor body parts become manifest. In the fifth month all limbs and minor body parts become even more individualized. Owing to the formation of an individualized fetal heart, consciousness becomes a distinct separate constituent which is why during the fourth month, that foetus, from the appearance of that organ onwards, forms desires from (all five) objects of sense. Henceforth the lady becomes the double-hearted (or pregnant) one and she makes her desires known. The two-hearted/pregnant one, (if) disrespected, causes a child to be born who is .....  
(*kukukūṇiṣṇaṇṇm*), dwarfish, with eye defects, blind, .....  
(*vānārīsutam*). That on which account she desires (something) is also that by means of which she can be gratified. Having obtained (to be) pregnant, she causes a son to be born who is really strong and has a long life expectancy.

- 19 And here are some more verses. Indeed that pregnant woman desires ..... (*bhoktum*) the objects of the senses during the course (of her pregnancy); for fear of injury to the foetus a physician, after having fetched these things, should give any desired object.
- 20 She should give birth to a son endowed with virtues; if the pregnant woman does not obtain (what she desires), he (the foetus?) (or she, the woman?) also becomes equally insecure him-/her-self.
- 21 With respect to all those desires of the senses in which the pregnant mother was slighted, she will give birth to a son who is defective in each of all those same corresponding

- senses.
- 22 A king in an interview with whom a woman during her pregnancy wins and she gives birth to a son who is wealthy and is highly fortunate.\*
  - 23 A pregnant woman, dressed in fine cloth, wearing silk and other things, gives birth to a charming son decorated (alaṅkā) ..... reṣiṇaṃ
  - 24 If (she goes) to a hermitage, she brings forth someone who is self-restrained and a stone-pillar of religion, resembling a godhead and begotten in the utmost happiness. Upon seeing someone in a high position designed by birth, she gives birth to a stone-pillar of violence.
  - 25 If she feels like eating the flesh of an Iguana (she produces) a son who is drowsy and who has the nature of a killer; by means of beef meat a son who is wild and who is powerful because he is savage in everything.
  - 26 When from the pregnant woman (there is a wish for meat of) buffalo a son is produced who has fearful red-eyes and who looks shaggy.
  - 27 Lacking
  - 28 Hence, she who during her pregnancy considers what people eat, wishes for her offspring the same via the food habits of the body.
  - 29 And that which has yet to happen again when the child is growing up, should be such that through divine intervention the pregnant woman should produce it during her pregnancy.
  - 30 In the fifth (month of pregnancy) the mind becomes more and more awakened; in the sixth intelligence (becomes awakened); in the seventh all the limbs and smaller body parts (are in place); if in the eighth (month) the ojas is not stable in that case the child does not live\* - he is provided with a share (of it) by the demons- so then strong excellent meat should be provided to him; if he is not yet caused to be born in the ninth, tenth, eleventh or twelfth (month), then there is something wrong.
  - 31 Furthermore, the umbilical cord is securely fastened to both juice-carrying vessels of the mother and carries the power (energy?) of the essential juice coming from the food of

the mother and what causes (the baby) to live is the distribution of the life juice,\* over all the body parts of the not yet (existing) newborn, from the beginning of conception (?) (niḥṣekān), and over (all) the transportation channels, running in all directions because of that intimate connection of the vessels.

- 32 Mainly, the developments of the foetus are: śaunakasays says that the head develops first because it is at the basis of this (development). Kṛtavīryasaysit states is the heart (which is at the base) of both intellect and mind. Pārāsa's son maintains instead that (it is) ..... (deraha?-) of the body. Mārkkandeya presumes that hands and feet are first because they are at the basis of movement in the body of the foetus. Subhūti Gautama claims all the limbs and their smaller subparts develop because of their development because the development of all the moving limbs is irretrievably connected, all turned into one and the same direction (of the thorax) together. At the time of early pregnancy, due to their extreme minuteness, they cannot be perceived, like sprouts of bamboo or seeds of mango. Thus, in the manner mango fruits becomes ripe, or as the shine of the hair of the head, or the way marrow appears in bones, step by step these things are seen more accurately, e.g. as an increase of black colour, and they become gradually apparent as the body (takes shape). Due to their feature of being so subtle, the minuteness of the hair of the head (and other examples) makes the black become apparent in this way; just so the growth of bamboo is also explained. Similarly in the beginning of a pregnancy, precisely because of the minuteness in all limbs and smaller body parts which are present, these are not well perceived (but) because of their increasing degree of blackness they become apparent.
- 33 It is claimed (that this) is not the consequence of any previous or any (bad or) excellent fate but solely because of the minuteness they\* are not being observed. In that context we shall explain features in the body that are paternal, maternal, connected with rasa, related to the soul, linked to the quietude of mind and relative to the

essence of being.\*\* Keeping this in mind, the hair of the head, tears, teeth, nails, the hair of beard and moustache, things made of hard substance (cartilage?)\* are brought about as paternal (elements). Muscle, blood, fat, marrow, the heart, the umbilicus (= the placenta? )\*\*\*\*, the liver, the spleen, the intestines, the anus are brought about as the soft maternal (elements). The increase in size of the body, the growth of the child and (its) outward appearance, the gain and loss of its erect attitude are caused by the *rasa*. The senses, consciousness, duration of life and the intensity of pleasure and pain are related to the spiritual element. We shall discuss later the *satva*-related things. Valour, healthfulness, strength, complexion and prudence depend on the existential disposition.\*\*

- 34 In this context a woman in whose right breast milk appears first,\* (whose) right flank is the larger one and leg shall be lifted first on the right side, and who is occupied for the largest part during pregnancy with things that are identified by male names, and in her sleep receives lotuses, blue lotus blossoms, Kumud-flowers, *āmṛāmrātaka*\*\* -flowers and so on, or precisely with male names, and who has an enhanced facial complexion, it is proclaimed to be likely (*bhāvetām?*) (that) it will lead to the birth of that son. In case of the opposite of this (it will lead to) a girl. She whose both sides are bent down and (whose) aforementioned belly is bulging forward, the typical feature from this knowledge is a sexless individual. She whose abdomen is sunk in the middle will produce ..... (prābhūtaṃ?) twins .
- 35 And here is (more). Women who sit down to the gods and Brahmins, have the advantage of a ceremonially pure offspring. They produce children with great qualities. In the opposite case however, they have no qualities.
- 36 The development of the limbs and the smaller anatomical parts progresses precisely all according to its own nature. The development of these limbs and the smaller anatomical parts is dependent upon the qualities and conditions which could not be known of the foetus by religion and could not

be caused by religion.\*

This is the third chapter of the śarīra.

**Cikitsāsthāna**





# Cikitsāsthāna 4: On the Treatment of Wind Diseases

## Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.<sup>179</sup>

## Translation

- 1 Now we shall describe the treatment of wind diseases.  
weight
- 3 When the wind enters the stomach, one should sequentially give to the patient, who has vomited, the formulation (*yoga*) with six-units (*ṣaḍ-dharaṇa*), together with tepid water, for seven nights.<sup>180</sup>

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<sup>179</sup> [HIML](#): IA, 265–266.

<sup>180</sup> The vulgate has the reading छर्दयित्वा which means “after making [him] vomit”. Thus, vomiting is a part of the treatment. Whereas छर्दित in the H manuscript is ambiguous: vomiting may be part of the treatment or a symptom of the ailment.

The expression “six units” refers to the six ingredients listed in the next passage. Ḍalhaṇa on 4.4.3 ([Su 1938](#): 420) noted that धरण in this context means a particular weight characterized as equivalent to 21 medium-sized [hyacinth beans](#). P. V. Sharma (1999–2001: 303) proposed that that the formulation contains six ingredients each the weight of a *dharaṇa*. See 4.31.7 ([Su 1938](#): 508) where the term धरण is defined in terms of other weights. (In epigraphical Sanskrit, a धरण may be a silver or gold coin ([sirc-1966](#)).)

*Aṣṭāṅgaḥṛdayasaṃhitā* 4.21.14 ([Ah 1939](#): 723) is the same verse, mutatis mutandis, but the editor noted (f.n. 6) a variant reading षट्करण in the commentary of Śrīkaṇṭha. There seems to be some confusion about this expression.

Ḍalhaṇa also noted that सुखाम्बु (“pleasant water”) means “slightly warm water.”

- 4 “Six-unit” is traditionally the formulation that is leadwort, *Indrajao*, velvet-leaf, *kutki*, Himalayan monkshood, and *myrobalan*. It cures serious diseases.
- 5 When the wind has entered the abdomen (*pakvāśa*) one should treat it with an oil purge. One should also treat it with cleansing enemas and very salty foods.
- 6 When the wind has entered the bladder, a cleansing enema method should be carried out. And once an inflamed wind is in the ears and the like, a procedure that destroys wind should be done.
- 7 When the wind has reached the skin, flesh, and blood, one should do an oil rub (*abhyāṅga*), apply a poultice (*upanāha*), rubbing (*mardana*) and ointments (*ālepana*). One should also perform blood-letting.<sup>181</sup>
- 8 When the wind has got into the ligaments, joints, and bones, an expert should apply oleation (*sneha*), a poultice (*upanāha*), cauterization (*agnikarma*), binding, and rubbing (*unmardana*).
- 9 When the wind is deep within the bone, then a strong physician should insert a tube (*nāḍī*) into the bone, which has been split open by manual agitation (*pāṇimantha*), and suck out the wind.<sup>182</sup>
- 10ab When the wind has reached the semen, one should perform the treatment for the defects of the semen.<sup>183</sup>
- 10cd–11 The intelligent physician should conquer the wind situated within the whole body by immersion, *kuṭī*, *karṣa*, *prastara*, oil massage, enema, and blood-letting.<sup>184</sup> Or, in case of wind situated in one part of the body and

181 On the translation of these methods of medical touch, see **broo-2021**. The vulgate includes ducts (*sirā*) as an added place that wind can enter.

182 The expression “which is split” could be construed with “wind.” The word order is not obvious. Ḍalhaṇa on 4.4.9 (*Su 1938*: 420) interpreted पाणिमन्थ as the name of a particular awl and described the bone being pierced by this awl so that a double-headed tube can be inserted into the resulting opening.

This verse is in *na vipulā* metre.

183 Ḍalhaṇa comments (*Su 1938*: 421) that this treatment for the defects of the semen is mentioned [earlier] as the शुक्रशोणितशुद्धि, the purification of the semen and the blood. This is the *Śārīrasthāna* Ch. 2, शुक्रशोणितविशुद्धि.

184 In H, the last syllable नि of the compound word does not make sense. The vulgate has the compound word ending with भि: which makes proper sense. For making a meaningful translation, we have accepted the vulgate reading here. Furthermore, Ḍalhaṇa describes the treatments *kuṭī*, *karṣū*, and *prastara* in his commentary in (*Su 1938*: 421). Regarding blood-letting, he comments there that because the verse has the plural form सिरामोक्षैः, five blood vessels have to be drained of blood if the wind is not pacified by oil massage, etc.

- contained within it, the intelligent physician should cure it with horns.
- 12 On the wind having mingled with phlegm, bile, and blood, the physician should treat it with non-hostile remedies. However, on the wind being inactive, the physician should perform blood-letting many times.
- 13 [On the wind being inactive], one should also lick the milk of the *pancamūlī* accompanied with salt and ??<sup>185</sup> mixed with oil, and one should indeed consume meat soup made sour with fruit.<sup>186</sup>
- 14-15 Or, one should consume cereal soup with a good amount of ghee, or the food that is beneficial and that curtails the wind. However, *cottony jujube*, etc.<sup>187</sup> with a wind-removing remedy combined with all sour substances and with the meat from a water body along with lots of unction, lukewarm<sup>188</sup> and salty, is well known as *Sālvala*.
- 16ab For patients with diseases of the wind, one should always apply this (*sālvala*) as a poultice.
- 16cd-18ab Whether a body part has become contracted or bent, is troubled by a [wind] disease, or has become numb, one should tightly bind it with a long strap made of tree bark, cloth, or wool [after applying the *sālvala* poultice]. Or, after massaging the affected body part and applying the *sālvala*<sup>189</sup> poultice on it, one should insert it into a sack made of the hide of a cat, mongoose, *udra*<sup>190</sup>, or deer.
- 18cd-19 Vomiting and *nasya* done under the supervision of an expert physician alleviates the wind that has entered the chest, loins, shoulders, or the nape of the neck. *Śirobasti* and blood-letting alleviate the wind situated in the head.
- 20-21ab In that (*śirobasti*), the oil should be held carefully for a duration of one thousand *mātrās*. Enema (बस्ति) alone curtails the wind that is situated throughout the whole body or in one part. This is just as the wind [curtails] its force.<sup>191</sup>
- 21cd-26 Oils, perspiration, oil massage, enema, unctuous purging of the bowels, *śirobasti*, oiling the head, unctuous smoke, gargling with lukewarm wa-

185 *Āgāradhūma* seems to be a plant as seen in Monier Williams' Sanskrit dictionary.

186 The vulgate reading दिह्यात् (should apply) totally changes the meaning.

187 For grammatical accuracy, there needs to be a *visarga* at the end of the word काकोल्यादि.

188 Perhaps सुखोष्णम् is an indeclinable. But, it could also be a grammatical inaccuracy where it should have a *visarga* at the end: सुखोष्णः.

189 This seems to be the correct spelling as against the unclarity in the earlier verses.

190 some aquatic animal

191 The last four words in H, तस्य वेगम् इवानिलः do not make sense in the context.

Perhaps  
kalka here  
could also  
mean the  
Terminalia  
Bellerica  
(विभीतक).

ter, *nasya*, unctuous paste, milks, meats<sup>192</sup>, soups, oils<sup>193</sup>, any unctuous substance, unctuous and salty meals that are made sour by fruits, bathing with lukewarm water, massages, saffron, ??, *cassia cinnamon*, *costus*, *cardamom*, *crape jasmine*, garments made of silk, wool, and fur, soft cotton garments, inner rooms with sunlight, no wind flow, and a soft bed, taking the warmth of fire, and celibacy, etc. are to be collectively employed for patients with wind diseases.

- 27 One should take *akṣa* quantities of unguent pastes<sup>194</sup> of *turpeth*,<sup>195</sup> ??, ??, ??, ??, and *embelia*, a *Bengal quince* fruit equivalent measure of ??-root and ??, two *pātra* quantities of both *triphalā*-decoction<sup>196</sup> and yogurt, and one *pātra* measure of ghee.<sup>197</sup> One should mix these ingredients all at once and cook the mixture properly. This (resultant) is ??-ghee. Unctuous purging of bowels is prescribed for treating wind disorders.<sup>198</sup> This procedure of making ??-ghee should also be referred for making *Asoka tree*-ghee and ??-ghee.<sup>199</sup>
- 28 One should collect the wooden logs of the instruments that have been used for a long time for extracting oil from sesame seeds. One should then have them chopped into very tiny pieces and then pound those pieces. Next, one should put them in a big vessel, submerge them in water, and boil them. Thereafter, one should collect the oil from the surface of the water with a goblet or by hand. Thereafter, one should properly cook wind-alleviating herbs with this oil that was effectively cooked.<sup>200</sup> This is the *anutaila* (अनुतैल)<sup>201</sup> that is mentioned in wind

192 The plural indicates milk and meat from various animals.

193 This is the second occurrence of the word *सेहा*: in this sentence. This seems to be an anomaly.

194 कल्क also means an unguent paste. Refer to Apte's dictionary.

195 In H, perhaps it should have been *त्रिवृद्* instead of *तृवृत्*.

196 *त्रिफलारस* is here taken to mean a decoction of *triphalā*.

197 The exact measurements of *akṣa* and *pātra* are given in Ḍalhaṇa's commentary in *Su 1938*: 422.

198 It should be understood here that the unctuous substance to be used for purging the bowels is the ??-ghee.

199 अशोक and रम्यक are the Ashoka and Chinaberry respectively.

200 In H, the word *दन्तप्रतीवायं* in the compound word *वातघ्नौषधदन्तप्रतीवायं* does not appear to make sense. Perhaps the syllable *य* should be *प*, thus making the word *प्रतीवापं* that refers to an admixture of substances to medicines either during or after decoction. Refer to Monier-Williams's Sanskrit dictionary.

201 The न् should be read ण्.

disorders. It is called *anutaila* because it is produced from tiny oily objects.<sup>202</sup>

- 29 Alternatively, one should burn a great amount of ??-wood on the ground for one night. When the fire gets extinguished the ash should be removed. Then, the ground that is relieved of the fire should be soaked with a hundred pots of oil cooked with ??, ??, and other herbs, and left in that condition for one night. Thereafter, one should take all the earth that is oily<sup>203</sup> in a big vessel and totally cover it with water.<sup>204</sup> The oil that rises up in that vessel should be taken out with both hands and kept nicely covered. Thereafter, one should properly cook that oil for as long as possible<sup>205</sup> with one thousand parts of each of the following—a decoction of wind-alleviating herbs, meat soup, milk, and *kāñjika*<sup>206</sup>—and thus prepare the *sahasra-pāka* (that which is cooked with thousands). The admixture added to the oil contains the *hemavata* herbs<sup>207</sup>, herbs of the southern region, *Withania*, and other wind-alleviating herbs.

While the oil is being cooked, conchshells should be blown loudly, umbrellas should be held, huge drums should be resounded, and whisk fans should be waved.<sup>208</sup> Thereafter, the perfectly cooked oil should be poured into a golden or silver pot and stored. This *sahasra-pāka* is the oil possessing undiminishing potency and is fit for kings.

Thus, that which is cooked with a thousand parts is called *sahasra-pāka*.

- 30 One should collect fresh leaves of *castor oil tree*, ??, ??, *weaver's beam tree*, *Indian beech*, ??, and *leadwort*.<sup>209</sup> These leaves should be com-

202 The word अनु in the compound word अनुतैलद्रव्येभ्यः should be read अणु.

203 In H, the word यावन् should have been यावान्.

204 The reading in H, कटाहेभ्यः सिंचेत्, does not make sense here. Thus, we have accepted the vulgate reading कटाहे ऽभ्यासिंचेत् for the translation.

205 The phrase “यावता कालेन शक्नुयात् पक्नुम्” appears as a part of a new sentence in H. But, we should take it to be a part of the earlier sentence for it to make proper sense.

206 Ḍalhaṇa comments (Su 1938: 423) that the word अम्ल here means काञ्जिक which is the water drained after boiling rice and is a little fermented. Refer Monier Willams's Sanskrit Dictionary.

207 The word should be हैमवताः as in the vulgate. It means “the herbs of the snowy mountains”. Ḍalhaṇa comments (Su 1938: 423) that हैमवताः refers to the herbs that grow in the northern region.

208 These activities are a symbolic way of showing reverence.

209 In H, the ending नाम् should be णाम् due to sandhi.

Euphorbia  
Antiquorum  
(Antique  
spurge)

pletely pounded along with salt in a mortar. This mixture should be put in a pot filled with oil<sup>210</sup>. It (pot) should be smeared<sup>211</sup> with cow-dung. Thereafter, the pot should be heated.<sup>212</sup> This (resultant) is the *patra-lavaṇa* (leaf-salt) that is mentioned in wind disorders.

- 31 In the same way, one should pound the stalks of ?? and eggplants smeared with salt and fill a pot with it.<sup>213</sup> In that pot, one should add ghee, oil, fat, and marrow. Then, one should smear it<sup>214</sup> and heat it as earlier. This (resultant) is the *sneha-lavaṇa* (fat-salt) that is mentioned in wind disorders.
- 32 One should collect the fresh fruits, roots, leaves, and branches of all the twenty [herbs]: ??, flame-of-the-forest, Tellicherry bark, Bengal quince, purple calotropis, ??, ??, ??, ??, ??, ??, ??, ??, ??, ??, Indian beech, ??, poison berry, ??, marking-nut tree, Asoka tree, ??. One should then mix them with salt and heat them as earlier.<sup>215</sup> The oil on top should be poured out completely with the salty mixture intact [at the bottom]. This mixture should be cooked thoroughly. The admixture added to it consists of long pepper, etc. This (resultant) is the salt called *kalyāṇaka* that is mentioned in wind disorders and in meals and drinks for the patients troubled by *plīhāgnisaṃga*, indigestion, loss of appetite, and piles.

Thus ends the fourth chapter on the treatment of wind diseases.

210 सेहघट can also mean a pot filled with ghee

211 The H or vulgate do not specify with words that it is the pot to be smeared. But, it is to be understood.

212 The word दाहयेत् usually refers to burning, but sometimes it can refer to heating.

213 In H, there should be a *visarga* after लवणा.

214 As earlier, the pot should be smeared with cow-dung.

215 It is to be understood that all these fresh branches, leaves, fruits, and roots of the herbs should be completely pounded together with salt. The mixture should then be put into a pot filled with oil or ghee. The pot should be smeared with cow-dung and then heated.

# Cikitsāsthāna 5: On the Treatment of Serious Wind Diseases

## Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.<sup>216</sup>

## Translation

- 1 Now we shall describe the treatment of serious wind diseases.
- 2
- 3 One group says that the blood afflicted by wind (wind-blood) (*vāta-rakta*) is of two types: spreading out over a surface (उत्तान) and deep (अवगाढ).<sup>217</sup> However, this is not correct.<sup>218</sup> Why? Just as leprosy, after spreading over a surface it (afflicted blood) becomes deeply situated. Therefore, its being of two different types is refuted.
- 4 When the wind is aggravated by fighting a strong person, etc.<sup>219</sup>, one's corrupted blood caused by eating heavy or hot food before the last meal is digested blocks the path of the aggravated wind. It then combines with the wind and simultaneously creates pain due to the wind-blood.

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<sup>216</sup> HIML: IA, 266.

<sup>217</sup> Ḍalhaṇa comments (*Su* 1938: 424) that उत्तान refers to being situated in the skin and flesh, and अवगाढ refers to being situated internally.

<sup>218</sup> In H, the word तन् should be तत्.

<sup>219</sup> These factors that aggravate the wind are mentioned in *Nidānasthāna*, Ch. 12, text 6.



This [condition] is called wind-blood (*vāta-śoṇita*). At first, it is situated in the hands and feet.<sup>220</sup> Later, it spreads throughout the body. Its early forms are pricking pain, burning, itching, ulcer, trembling<sup>221</sup>, roughness of the skin, pulsation in the blood vessels, tendons, and tubular vessels<sup>222</sup>, weakness of the thighs, as well as the sudden appearance of dark brown, tawny, or red spots on the soles of the feet, fingers, ankles, and wrists. The disease becomes fully manifest in the person who does not undertake the means to revert the disease or applies a wrong treatment. Its symptoms have been mentioned. Among them, weakness occurs for the one who does not counter the disease.

- 5 Generally, wind-blood occurs in those who are very delicate, those who eat the wrong foods and enjoy improperly, those who are fat, and even in those who indulge in pleasure.
- 6 In that regard, one should treat the patient who is not degenerating due to wasting of life air, thirst, fever, unconsciousness, dyspnea, trembling, and loss of appetite, is not oppressed by the contraction [of limbs], is strong, composed, and has the means.
- 7 In the treatment, at the beginning itself one should do blood-letting of the wind-affected body part little by little and more than once. That (slow blood-letting) is because of the danger of further aggravation of wind. One should avoid doing blood-letting of the part hardened or weakened by excessive wind.<sup>223</sup> Thereafter, one should make the patient do the remedies of vomiting, etc. If the wind that is mixed [with blood] or separated is very aggravated then one should make him consume aged ghee or goat-milk. Or, [one can give him] half a measure of oil added with an *akṣa* of liquorice and cooked with hare foot uraria<sup>224</sup>, or the oil that is sweetened by sugar and honey and cooked with dried ginger and bulrush. Or, one should boil milk with an eight times volume of the decoction of the following herbs: beautyberry, grey orchid, ??, hare foot uraria<sup>225</sup>, ??, wild asparagus, ??, and ??. This milk should then be used to cook oil with the admixture of pastes of ??, ??,

220 In H, the word तन् should be तत्.

221 In H, there should not have been the स् after स्तम्भ.

222 In addition to blood vessels, it would also include the nerves.

223 In H, the reading अम्लान does not make sense given the context. Therefore, we have accepted the vulgate reading म्लान for the translation.

224 Ḍalhaṇa glosses (Su 1938: 425) *śṛgālavinnā* as *prśniparṇī*.

225 According to Ḍalhaṇa, *śṛgālavinnā* is *prśniparṇī*.



??, ??, deodar, sweet flag, and ??. This (resultant) should be utilised in drinks, etc. Or, one should use the oil that is cooked with a decoction of wild asparagus, prickly chaff-flower<sup>226</sup>, ??, liquorice, giant potato, heart-leaf sida, country mallow, and ??<sup>227</sup>, with the admixture of cottony jujube, etc. Or, one should use the heart-leaf sida-oil that is cooked as *śatapāka*.<sup>228</sup> Or, [the affected body part] should be moistened with milk that is boiled with the roots of wind-alleviating herbs, or it should be moistened with sour things.<sup>229</sup> In that regard, five remedies prepared with milk are described. For preparing a poultice, milk should be cooked in ghee, oil, fat, marrow, and *dugdha*<sup>230</sup> separately with each of these powdered grains or pulses—barley, wheat, sesame, mung beans, or green gram—that is mixed with unctuous pastes of cottony jujube, purple roscoe, ??, ??, heart-leaf sida, country mallow, hare foot uraria<sup>231</sup>, ??, ??, sugar, bulrush<sup>232</sup>, ??, and sweet flag. Or, the essence of unctuous fruits<sup>233</sup> can be used as a poultice. Or, a *veśavāra*<sup>234</sup> prepared from the flesh of a fat *cilicima* fish<sup>235</sup> can be used instead. Or, [one

226 Ḍalhaṇa glosses (Su 1938: 425) *mayūraka* as *apāmārga*.

227 Ḍalhaṇa comments (Su 1938: 425) that *halfa grass*, ??, ??, *halfa grass*, ??, and ?? are called *ṭṛṇa* (grass).

228 *Śatapāka* seems to be an oil that is prepared with a hundred parts of some things similar to *sahasrapāka* that is prepared with one thousand parts of some herbs. Refer *Cikitsāsthāna* Ch. 4 text 29 for the preparation of *sahasrapāka*.

229 Ḍalhaṇa comments (Su 1938: 425) that the sour things (*amla*) are ??, Indian jujube, ??-water, etc. *Surā* is some kind of liquor, *sauvīraka* is perhaps the fruit of the jujube tree, and *tuṣa* is perhaps *Terminalia Bellerica* (विभीतक).

230 In the *Suśrutasaṃhitā*, the word for milk is *kṣīra* or *payas* but not *dugdha*. Therefore, the word *dugdha* here can mean the sap of plants or something that is extracted.

231 *śṛgālavinnā*

232 For *kaśerukā*

233 Ḍalhaṇa comments (Su 1938: 425) that the unctuous fruits mentioned here are sesame, castor, flax, ??, etc.

234 In H, the reading वैशवारो does not make sense. It should have been वेशवारो, as shown in the vulgate, which is the reading we have accepted here.

*Veśavāra* is boneless meat minced, steamed, and added with spices, ghee, etc. Refer to 'Ayurveda Medical Dictionary' by Ranganayakulu Potturu.

Perhaps the word वैशवार is an earlier form of the word वेशवार.

235 H has the compound word नलपीनमत्स्य. नलमीन is a particular fish known as *cilicima* (चिलिचिमः). See *Amarakośa*. Also, if the name is नलमत्स्य then the word पीन (fat) within the name is not according to proper Sanskrit. But, it can be allowed because the word मत्स्य (fish), instead of being a part of the name, can be considered to mean fish in general and thus the word पीन becomes its modifier. Thus, नलपीनमत्स्य can mean "a

The webpage  
https://hindi.shabd.in/vairagya-  
shatakam-  
bhag-  
acharya-  
arjun-  
tiwari/post/117629  
says that  
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belongs  
to the  
*Nīlīratna*. I  
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can use] the poultice containing Bengal quince-rind<sup>236</sup>, crape jasmine, deodar, ??, grey orchid, peas, costus, ??, liquor, yogurt, and whey. Or, [one can use] the ointment prepared by mixing citron, amla<sup>237</sup>, salt, and ghee with honey and horseradish tree-root. Or else, [one can use] the unctuous sesame paste.

- 8 When the [condition of wind-blood] has a predominance of bile, the patient should be made to drink a decoction of grapes, ??-fruit, Indian ipecac, liquorice, sandalwood, and white teak. This decoction is sweetened with honey and sugar before consumption. Or, the decoction of wild asparagus, pointed gourd, cassia cinnamon, triphalā, ??, and heart-leaved moonseed should be given. [The patient should be administered] ghee that is prepared with sweet, bitter, and astringent [remedies].<sup>238</sup>

[The patient] should be sprinkled with a decoction of ??, lotus stalk, sandalwood, and ?? mixed with goat-milk<sup>239</sup>, or with rice water that is mixed with milk, sugarcane juice, honey, and sugar, or with whey and sour rice gruel mixed with a decoction of grapes and sugarcane. Or else, [the patient] should be sprinkled with ghee that is prepared with *jīvanīya*<sup>240</sup> or sprinkled with ghee that is purified for one hundred times.

The poultice [to be applied] should be made of rice flour or of the paste of sour rice gruel mixed with ??, ??, scramberry<sup>241</sup>, ??, ??, turmeric, horned pondweed, sacred lotus, etc. The poultice should be mixed with ghee.

fat fish that is a नल (*cilicima*)”.

Ḍalhaṇa says in his comment (Su 1938: 425) that नलमीन is a type of रोहित (*rohita*). Monier Williams says that *rohita* is a kind of fish: *Cyprinus Rohitaka*. Regarding the *rohita* fish, there is a *subhāṣita*: अगाधजलसञ्चारी न गर्व याति रोहितः | अङ्गुष्ठोदकमात्रेण शफरी फर्फरायते || This indicates that *rohita* is a deep water fish.

<sup>236</sup> The word पेसिका in H should be read पेशिका.

<sup>237</sup> Perhaps it could mean vinegar or sour curds. Refer to Monier Williams Sanskrit Dictionary.

<sup>238</sup> Ḍalhaṇa comments (Su 1938: 425) that the sweet remedies are cottony jujube, etc., bitter remedies are pointed gourd, etc., and astringent remedies are triphalā, etc.

<sup>239</sup> The compound word ending with कषायेण is taken to be a *bahuvrīhi* for अजाक्षीरेण (goat-milk).

<sup>240</sup> *Jīvanīya* seems to be a group of medicinal herbs. There is an Ayurvedic preparation called *jīvanīya-ghṛta*. Refer to the *Āyurvedīya Śabdakośa* vol. 1.

<sup>241</sup> तालीस should be read तालीश

- 9 The [condition of wind-blood] with a predominance of blood should be treated in the same way. Also, blood-letting should be done repeatedly.
- 10 However, when the [condition of wind-blood] has a predominance of phlegm, the patient should be made to consume a decoction of **emblic** and **turmeric** that is sweetened with honey, or a decoction of *triphalā*, or a paste of **liquorice**, ??, **chebulic myrobalan**, and ??. He should be made to drink **chebulic myrobalan** with water mixed with a little urine. He should be sprinkled with oil, urine, salty water, and liquor that are acidic<sup>242</sup>. Or, he should be sprinkled with a decoction of **golden shower tree**, etc.
- The patient should be massaged with ghee cooked with sour cream, urine, liquor, ??<sup>243</sup>, **liquorice**, ??<sup>244</sup>, and ??.
- The poultice should be made of either the paste of white mustard, or the paste of sesame and **Withania**, or the paste of ??<sup>245</sup>, **selu plum**, and **wood apple**, or the paste of honey, **horseradish tree**, and **hogweed**,<sup>246</sup> or the paste of dry ginger, long pepper, black pepper,<sup>247</sup> **hare foot uraria**, and **poison berry**.<sup>248</sup> These five poultices are prepared with salty water. Thus, they have been described.
- 11 In case of combined aggravation of two humours or simultaneous aggravation of all three humours, the stated methods of treating those aggravations should be combined.<sup>249</sup>
- 12 In all [aggravations], one should consume **chebulic myrobalan** with jaggery. Or, one should have a diet of rice cooked in milk for ten days and should drink a mixture of **long peppers** crushed in milk, with increasing by five **long peppers** each night. Then one should reduce them again by the order of five more [each night].<sup>250</sup> In this way, one should

The provisional edition should be modified accordingly.

242 Reading the word सुक्त in H as शुक्त

243 Monier Williams states Rumex Vesicarius for śuktā

244 DCS has this entry: Cryptolepsis buchananii Roem. et Schult. (Surapāla (1988), 453)  
Decalepis hamiltonii Wight et Arn. (Surapāla (1988), 453)

245 According to V. S. Apte, दारु can mean देवदारु.

246 H has a short अ at the end instead of the long आ.

247 व्योषतिक्ता refers to the group of these three pungent spices. Also see *Sūtrasthāna* 14.35.

248 In H, the Sanskrit syntax does not match up with what the author is trying to say. The name of the fifth paste should also have been in the nominative case, as the other four pastes.

249 It means that the respective methods of treating the aggravation of individual humours should be combined.

250 In H, the letter अ् in भूयञ्च should have been श्.

[reduce] all the long peppers. This is called *Pippalīvarddhamānakam* (Increasing Long Peppers). It indeed cures wind-blood, intense fever,<sup>251</sup> loss of appetite, jaundice, abdominal affection, piles, heavy breathing, cough, wasting disease, weak digestion, and heart disease.

The poultice is a paste of ??, sandalwood, ??, ??, wild asparagus, bulrush,<sup>252</sup> ??, ??, liquorice, ??, ??, ??, ??, heart-leaf sida, country mallow, and *Holostemma creeper* mixed with milk. Or it is a paste of white teak, liquorice, and ?? mixed with ghee and cream. Or it is olibanum cooked with milk that is mixed with ??, ??, ??, liquorice and the group of sweet herbs.

Old ghee that is cooked with emblic and chir pine and sweetened with sugar and honey is for drinking. Old ghee that is cooked with *jīvanīya* or that is cooked with a decoction of ?? is for sprinkling. Cooked heart-leaf sida oil is for sprinkling, bathing, enema, and eating<sup>253</sup>. One should eat food preparations made of rice, ??, barley and wheat accompanied with milk, meat soup, or mung beans soup that is not sour. Blood-letting also [should be done]. The treatments of vomiting, purging of bowels, enema, and oily enema should be conducted when the humours are highly aggravated.

13

14 There are verses in this regard.<sup>254</sup>

*There is immediate relief by the application of remedies such as these by which the physicians cure the chronic condition of wind-blood.*

15-16

*Poultice, sprinkling [oil], plaster, oil massage,<sup>255</sup> spacious and comfortable rooms<sup>256</sup> with no wind, soft pillows, comfortable beds, and soft massages are recommended in the condition of wind-blood.*

17

*Exercise, mating, anger, eating hot, sour, or salty foods, sleeping during the day, and food that is slimy or heavy should be avoided.*

251 Perhaps विषमज्वर could mean irregular fever.

252 H has कशेरुका.

253 Perhaps it means that one should eat foods cooked in that oil.

254 The word भवति in H should have been भवन्ति.

255 In H, the part व्यजनानिला: does not make proper sense in the verse. Emending it to व्यजनानि च could be a consideration, but fanning (व्यजन) a patient with wind-blood is not good, as understood from the recommendation that such a patient should stay in a non-windy room. Therefore, we have accepted the vulgate reading for the first half of this verse.

256 In H, read the स सरणानि as श.

- 18 One should treat the person who is affected with spasmodic contraction,<sup>257</sup> who does not have droopy eyes and crooked eyebrows, whose fingers have not become rigid, who is not perspiring or trembling, who is not in a state of delirium, who is not bed-ridden,<sup>258</sup> and who is not restrained externally. There at the beginning itself,<sup>259</sup> after rubbing the patient with oil and making him perspire, one should treat him with a strong *avapīḍa*<sup>260</sup> in order to clear his head. Then, the patient should be made to drink filtered ghee that is properly cooked with a decoction of *beggarweed* and other herbs, sugarcane juice, milk, and yogurt. In that way, the wind does not spread exceedingly.

Thereafter, one should gather wind-alleviating herbs such as *deodar*, etc. and other constituent parts, along with *barley*, ??, and *horse gram*, and the flesh of a freshwater aquatic creature all at one place and prepare a decoction of them. One should take this decoction and mix it properly with sour substances and milk, and then cook the *pratīvāpa*<sup>261</sup> of *liquorice* in this mixture along with ghee, oil, body fat, and bone marrow. This is *trivṛt* that should be recommended in treatments of sprinkling, oil massage, applying a poultice, oral consumption, oily enema, and errhine for patients having spasmodic contractions.

The patient should then be made to sweat by the methods described earlier. If the wind is stronger then the patient should be immersed in [a vessel] filled with lukewarm fluid used for sprinkling (*trivṛt*). Or he should be kept in the hot fireplace of a blacksmith.<sup>262</sup> Or else he should be made to sweat by [a mixture of] ??, *veśavāra*,<sup>263</sup> and milk.

Oil cooked with the juice of *radish*, ??, ??, ??, and ?? should be used in

There, Dalhana comments that de-liberation on *avapīḍa* had been done earlier when it was mentioned. Find that description to know more details.

257 In H, the reading अपताकिनम् should have been अपतानकिनम्.

258 V. S. Apte has खट्वयति. The *Āyurvedīya Śabdakośa* has the entry खट्वापातिन् which means “one who is inclined to fall from bed.” Perhaps the reading in H has an error of the letter या which should have been पा.

259 In H, प्रागैव should have been प्रागेव.

260 The *Āyurvedīya Śabdakośa* has the entry अवपीड that means administering an oily paste through the nose. Refer *SS Cikitsāsthāna* Ch. 40 text 44 for a better understanding of *avapīḍa*.

261 It refers to an admixture of substances to medicines either during or after decoction. Refer to Monier-Williams’s Sanskrit dictionary.

262 H has the reading रथाकारचुल्लयाम् that means “fireplace shaped like a chariot”, but the vulgate reading रथकारचुल्लयाम् makes more sense here. Thus, we have accepted it.

263 Refer the above text no.7 for *veśavāra*. In H, the syllable वै should have been वे.

sprinkling, etc. for patients with spasmodic contractions.<sup>264</sup> Sour yogurt mixed with **black pepper** and drunk on an empty stomach alleviates spasmodic contractions. Or else, ghee, oil, body fat, or bone marrow [can be consumed on an empty stomach].

This procedure of treatment thus described is for spasmodic contractions caused only by wind. When mixed humours cause it then the treatment should also be mixed. And when the spasms subside the patient should be given *avapīḍa*-s. One should also consider the fats of cock, crab, black fish, and porpoise.<sup>265</sup> Milk prepared with wind-alleviating medicines. Gruel prepared with barley, ??, **horse gram**, **radish**, yogurt, ghee, and oil.

One should treat this recurring spasm for ten nights with oil massage, purging of bowels, enemas, and oily enemas. One should also look up the treatment of diseases caused by wind. One should also undertake preventive measures.

- 19 One should treat the paralytic (hemiplegic) patient whose limbs are not languid, who is in pain, and who is self-composed. There, at the beginning itself the patient should be massaged with oil and made to sweat. After cleansing the patient with a mild purifier,<sup>266</sup> he should be administered with an oily enema and then a non-oily enema. Then at the appropriate time, he should be treated with special enemas of the brain and the head according to the method prescribed in the treatment of *ākṣepaka*.<sup>267</sup> *Anutaila* should be used for massage.<sup>268</sup> *Sālvala* should be used for poultice.<sup>269</sup> **heart-leaf sida** oil should be used for oily enema. In this way, the unremitting patient should take the treatment for three to four months.

20

21

- 22 One should treat the patient with *ardita*<sup>270</sup> who is strong and possesses

Search for the section where the treatment of *ākṣepaka* is described.

Make the first letter of sentence capital.

264 The word तैलम् is not present in H but is present in the vulgate. We have accepted it.

265 H has the reading रसान् which means “juices”. It seems unrealistic that juice would be extracted by crushing these whole animals. Vulgate has the reading वसाः instead of रसान् which appears to be the more probable reading. Thus, we have accepted it.

266 According to P. V. Sharma, this refers to mild evacuatives (purgatives).

267 Refer *Nidānasthāna* 1.50-51 for *ākṣepaka*.

268 For the procedure of preparing *anutaila*, refer *Cikitsāsthāna* 4.28.

269 For the procedure of preparing *sālvala*, refer *Cikitsāsthāna* 4.14-15.

270 Refer *Nidānasthāna* 1.71-72 for *ardita*.



the means with the method prescribed in treating wind diseases. The unique thing is the treatment with enemas of the brain and the head, errhine, smoke, poultice, and steam bath through tubes. Then, one should take the great five roots (*pañcamūlī*) with grass and prepare its decoction in milk mixed with twice the water. Then, the decoction with the milk remaining<sup>271</sup> should be brought down [the stove] and filtered. It should then be mixed with a *prastha*<sup>272</sup> of oil and again placed over fire and cooked thoroughly. Then, the oil mixed with milk should be brought down [the stove] and then churned after it cools down. This is called *kṣīrataila* that should be used in drinks, etc. for patients with *ardita*.

- 23 In the diseases of *gṛdhrasī*, *viścañcī*, *kroṣṭukaśīrṣa*, *paṅgukalāya*, lameness, *vātakāṇṭaka*, burning sensation in the foot, numbness of the foot, *avabāhuka*, deafness, and *dhamanīvāta*, one should pierce the blood vessel as described earlier and, barring the case of *avabāhuka*, one should look up the treatment for wind diseases.
- 24 However, in the case of *karṇamūla*,<sup>273</sup> lukewarm juice of ??<sup>274</sup> mixed with liquorice, oil, and salt should be put into the ears.<sup>275</sup> Or else one can use goat urine, liquorice, and oil. Or else one can use oil that is cooked with citron, pomegranate, ?? juice, and urine.<sup>276</sup> Or else one can use oil that is cooked with sour liquor, buttermilk, and urine. One should also make the patient sweat with a steam bath through tubes. One should also look up the treatment for wind diseases. More will be said later.
- 25 In the case of *tūnī* and *pratitūnī*, one should make the patient drink ghee and salt with hot water. Or else one should administer the powder of long pepper and other herbs with hot water. Or else one should make

271 It means that the water has evaporated.

272 Ḍalhana comments (Su 1938: 425) that a *prastha* is a measure of weight that is equal to 32 *pala*-s.

273 The vulgate has the reading कर्णशूले which appears to be a more credible reading according to the context.

274 शृङ्गवेर appears to be a name of ginger. Refer to the Sanskrit dictionary of Monier Williams.

275 In H, the reading रसैः does not seem to make sense here. Hence we have accepted the vulgate reading रसम्.

276 In H, the word तैल should have been तैलम् to make proper sense. The vulgate has this reading. Thus we have accepted it.

the patient drink ghee that is made thick with asafoetida and ??.<sup>277</sup> One should also treat the patient with enemas.

- 26 In the case of *ādhmāna*,<sup>278</sup> however, one should do *avatarpaṇa*,<sup>279</sup> heating the hands, *phalavartikriyā*,<sup>280</sup> stimulation of digestion, and [administer] digestives. One should also employ the purging of bowels and enemas. In the case of *pratyādhmāna*,<sup>281</sup> one should employ vomiting, fasting, and stimulation of digestion.
- 27 In the case of *aṣṭhīlā* and *pratyāṣṭhīlā*,<sup>282</sup> the procedure is that of *gulma* and internal abscess.
- 28 The beneficial asafoetida, the three pungent spices (long pepper, black pepper, and dry ginger), *sweet flag*, ?? grains, ??, *pomegranate*, ??, *velvet-leaf*, *leadwort*, ??, *rock salt*, ??, ??, ??, *natron*, *long pepper* root, ??, ??, ??, ?? (juniper berry), and ?? (cumin seeds) should be powdered. This powder should be mixed with a lot of *citron* juice. Then it should be made into pills each weighing one *akṣa*. Thereafter the patient of wind disease should consume one pill every morning. This medicine indeed cures *gulma*, rapid breathing, cough, loss of appetite, heart disease, *ādhmāna*, *pārsvodara*, *bastiśūla*, *anāhamūtra*, painful piles, *plīhodara*, and *pāṇḍuroga*. Also, this medicine is excessively used in cases of *tūnī* and *pratitūnī*.
- 29 There are verses in this regard.

*The wind that has entered into the body tissues should be correctly understood as either pure or vitiated by humours<sup>283</sup> and should be*

277 यवक्षार is an alkali prepared from the ashes of burnt green barleycorns. Refer to the Sanskrit dictionary of Monier Williams.

278 Refer to *Nidānasthāna* 1.88. V. S. Apte explains it as “swelling of the belly”. P.V. Sharma has translated it as flatulence.

279 We are unclear about its meaning. The vulgate has the reading अपतर्पण that means fasting.

280 The entry फलवर्ति has the meaning “suppository” in the Sanskrit dictionary of Monier Williams. The Cambridge dictionary explains suppository as “a small, solid pill containing a drug that is put inside the anus, where it dissolves easily.” Refer to the link <https://dictionary.cambridge.org/dictionary/english/suppository>. Last accessed 30-Oct-2023.

281 Refer to *Nidānasthāna* 1.89. According to the Sanskrit dictionary of Monier Williams, it is a kind of tympanites or wind-dropsy.

282 Refer to *Nidānasthāna* 1.90 and 1.91.

283 In H, the reading लक्षणोन्यामैश्च does not make sense. Hence I cannot translate it. Perhaps the correct reading could be लक्षणाभ्याञ्च. This would connect with the two con-



- cured accordingly.
- 30 The wind that is accompanied by fat causes a swelling that is painful, hard, and cold. The physician should properly treat it like a treating a swelling.
- 31 When the wind accompanied by phlegm and fat enters the thighs, it causes pain in and immobility of the thighs due to numbness, pain, and fever.
- 32 Also, the thighs become pained, stiff, cold, and do not quiver due to sleep. They become heavy and as if belonging to someone else.<sup>284</sup>
- 33 That is called ūrūstambha. Others call it āḍhyavāta. In that case, one should drink the ṣaṇḍharāṇa powder with cool water.
- 34 Similarly, consuming the powder of long pepper and other herbs with hot water is beneficial. Or else, one should consume the powder of triphalā with honey and kutki.
- 35-38 Or else, one should drink the best ?? or ?? with urine. Such a person cures the wind that is afflicted by phlegm and accompanied by fat, as well as heart disease, loss of appetite, gulma, and internal abscess.
- One should employ salty urine [therapy], sudation, and hard rubbing. One should also apply [the paste of ] mustard and ?? fruits mixed with urine.<sup>285</sup>
- One should eat old ??s, ??, ??, etc. along with uncooked<sup>286</sup> flesh of wild animals and unsalted vegetables that are beneficial.
- 39 When the phlegm and fat become amply reduced one should again employ the treatment of oil massage, etc. for the patient.

ditions of the wind as stated in the verse.

284 In H, the verb वर्तते should have been in the dual. Also, the word आस्थिरौ does not make sense. The vulgate has the sensible reading अस्थिरौ which we have accepted here.

285 The word दिहेत् in H is not a proper Sanskrit word. We have taken its proper form दिह्यात् as given in the vulgate.

286 The vulgate has the reading अघृतैः that means without ghee.



# Cikitsāsthāna 15: On Difficult Delivery

## Literature

Meulenbeld offered an annotated overview of this chapter on fetal malpresentation and a bibliography of earlier scholarship to 2002.<sup>287</sup> **das-2003** made observations about the afterbirth (*aparā*) that is mentioned in 4.15.17 (**Su 1938**: 432).<sup>288</sup> **selb-2005** has explored gynecological narratives in ayurveda.<sup>289</sup>

## Translation

- 1 And now we shall explain the difficult delivery medically treated.
- 3 Nothing else is more difficult than the extraction of a foetus since it has to be performed in the region of vagina, liver, spleen, intestines and the uterus. Actions like pushing up, pulling down, cutting off, incising, removing, pressing and straightening must be done using one hand, without hurting the foetus or the pregnant woman, Therefore, having considered that and obtaining permission, one should proceed with care.
- 4 Eight types of the positions of difficult foetus have earlier been mentioned briefly. Even if, in the natural birth process also the large / wrong way of the head, shoulders or hips of a foetus / child cling firmly in the passage.

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<sup>287</sup> **HIML**: IA, 271–272.

<sup>288</sup> **das-2003**.

<sup>289</sup> **selb-2005**; **selb-2005b**.

- 5 In the case of a live foetus, the delivering ladies should attempt to deliver it. And, during this process, they should be made to hear the sacred verses repeatedly meant for expulsion of a foetus.

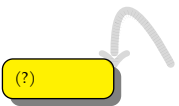
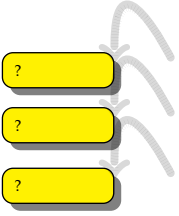
6 *O beautiful woman, may the divine nectar and the moon and the sun and Uccaiśravas reside icumbhalakan your house.*

7 *O lady, may this nectar extracted from the water release this tiny foetus of yours. May the fire, wind, sun and Indra together with the ocean bestow upon you the peace.*

- 9 And, as mentioned before (3.10.16-20) the medicine should be administered. In the case of a dead fetus, (the physician) having inserted (his) hand lubricated with the *dhanvaka*, *mṛttikā* – soil, the *śālmālī*- the *seemul* and ghee into the vagina of a woman lying on her back, whose thighs are bent with the elevated waist with the support of the cloth of *cumbhalaka* should take away the fetus. In the case, the fetus coming out with both the thighs, should be stretched out in a normal way. If the fetus has reached with only one thigh, spreading out its other thigh it should be taken out. If the fetus is coming out with its buttocks portion, squeezing the buttocks upward, spreading the thighs it should be taken out. A fetus having come in a transverse position like an oblique (तिर्यक्चीनस्य ?) iron club, lifting upward its half of the lower part from behind, straightening its half of the upper part, bringing it to the passage of vagina, it should be taken out. The last two positions of the dead fetus cannot be accomplished. Thus, in this state, instrument should be employed / surgery should be undertaken.

- 10 But, the live fetus should not be torn apart in any case. As, the live fetus may kill the mother and self soon.

- 12 Next, assuring safety to the lady, cutting the head of the fetus with the instrument that has disc on the top (मण्डलाग्र) or finger shaped instrument (अङ्गुलिशस्त्र); removing the skull, the fetus should be taken out holding the forceps at its chest and armpit. If the head of the fetus is not separated, the fetus should be drawn out from its orbital regions or cheek (with the forceps); if the shoulders are stuck up in the passage, the fetus should be taken out by cutting its arm / arms at the shoulder region; tearing the abdomen when bloated with wind just like a stretched leather bag used for holding water, casting off the intestine,



the loosened fetus should be taken out. Or else, if its thighs are adhered to the passage, the bones of the thighs should be cut and fetus is removed.

- 13 The fetus is adhered to the passage from whichever its body part, the physician by separating that part should remove the fetus carefully and by all means the woman should be protected.
  - 14 For, irritated wind causes different movements of the fetus. In this situation, the wise physician should act intelligently.
  - 15 And, the learned physician should not delay even for moment in removing the dead fetus as it kills mother in no time like a breathless animal.
- If impacted with hip, the hip bones should be cut and then delivered.



# Kalpasthāna





# Kalpasthāna 1: Protecting the King from Poison

## Introduction

The first chapter of the Kalpasthāna of the *Suśrutasamhitā* addresses the topic of protecting a king from those who would assassinate him using poison. The king's kitchen is presented as the site of greatest vulnerability. The staff in the kitchen must be vetted carefully and watched for signs of dissimulation. The description of the body-language that tells a poisoner (verses 18–25) are engaging and vivid. These verses are closely parallel in sense to a passage in the *Arthaśāstra* that says,

The signs of a poisoner, on the other hand, are as follow: dry and dark look on the face, stuttering speech, excessive perspiration and yawning, trembling, stumbling, looking around while speaking, agitation while working, and not remaining in his place.<sup>290</sup>

Next, the text discusses the signs of poison in toothbrushes, in food, drink, massage oil and other items that are likely to come into physical contact with the king. In passages that are again paralleled in the *Arthaśāstra* the work describes how poisoned food kills insects and crackles in a fire, flashing blue and the reactions of various birds to poison are described.<sup>291</sup>

The work then moves on to the various symptoms experienced by the king after being poisoned, and remedies appropriate to each case. Poison

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<sup>290</sup> *Arthaśāstra* 1.21.8 (Kangle 1965: 1, 30), translation by Olivelle (2013: 97).

<sup>291</sup> Cf. *Arthaśāstra* 1.21.6, *ibid.*, Olivelle (2013: 96).

exhibits characteristic signs when added to milk and other drinks.<sup>292</sup> Further forms of poisoning, their symptoms and treatments are described and finally the king is advised to live amongst trusted friends and to protect his heart by drinking various ghee compounds. He should eat the meat and soup made from various animals, including peacock, mongoose, alligator, deer. The chapter ends with the description of an emetic.

## Literature

A brief survey of this chapter's contents and a detailed assessment of the existing research on it to 2002 was provided by Meulenbeld.<sup>293</sup> Translations of this chapter since Meulenbeld's listing have appeared by wuja-2003srik-2002P. V. Sharma (1999–2001: 3, 1–15).<sup>294</sup>

## Manuscript notes

- MS Kathmandu NAK 5-333 has foliation letter numerals, for example on f. 323a, that are similar to MS Cambridge CUL Add.1693,<sup>295</sup> dated to 1165 CE.<sup>296</sup>

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<sup>292</sup> Cf. *Arthaśāstra* 1.21.6 again.

<sup>293</sup> [HIML](#): IA, 289–290.

<sup>294</sup> For a bibliography of translations to 2002, including Latin (1847), English (1877), Gujarati (1963) and Japanese (1971), see [HIML](#): IB, 314–315.

<sup>295</sup> Scan at [cudl.lib.cam.ac.uk/view/MS-ADD-01693/1](http://cudl.lib.cam.ac.uk/view/MS-ADD-01693/1).

<sup>296</sup> See Bendall's chart of Nepalese letter-numerals (**bend-budd**).

## Translation

- 1–2 And now I shall explain the procedures for safeguarding food and drink, as were declared by the Venerable Dhanvantari.<sup>297</sup>
- 3 Divodāsa, the king of the earth, was the foremost supporter of religious discipline and virtue. With unblemished instruction he taught his students, of whom Suśruta was the leader.<sup>298</sup>

### [Threats to the king]

- 4–5 Evil-hearted enemies who have plucked up their courage, may seek to harm the king, who knows nothing of it. He may be assailed with poisons by or by his own people who have been subverted, wishing to pour the poison of their anger into any vulnerability they can find.<sup>299</sup>
- 6 Therefore, a king should always be protected from poison by a physician.
- 7 The racehorse-like fickleness of men's minds is well known. And for this reason, a king should never trust anyone.<sup>300</sup>
- 8–11 He should employ a doctor in his kitchen (*mahānasa*) who is respected

<sup>297</sup> MS H adds in the margin अथ खलु वत्स सुश्रुतः “Now begins Vatsa Suśruta.” This phrase has been copied here by the scribe from the beginning of the *Suśrutasaṃhitā* chapter in the *sūtrasthāna* on the rules about food and drink (1.46.3 (Su 1938: 214)). The scribe presumably felt, not unreasonably, that this section had common subject matter with the present chapter. Further, SS 1.46.3 is the only place in the Nepalese transmission of the *Suśrutasaṃhitā* that names Dhanvantari and integrates him into the narrative of the *Suśrutasaṃhitā* as the teacher of Suśruta.

The mention of Dhanvantari here is the only other time in the Nepalese transmission that this authority is cited as the source of Ayurvedic teaching, and the unique occurrence of this actual phrase, “as was declared by the Venerable Dhanvantari.” See the discussion by **kleb-2021b**, who concludes that the earliest recoverable recension of the *Suśrutasaṃhitā* may have had the phrase only at this point and not elsewhere in the work. See the further discussion by **birc-2021**.

<sup>298</sup> This is a quite different statement from the vulgate which has Dhanvantari as the teacher, and calls him the Lord of Kāśī (*kāśīpati*) (Su 1938: 559). Ḍalhaṇa followed the vulgate but explicitly noted the reading before us with small differences: दिवोदासः क्षितिपतिस्तपोधर्मश्रुताकरः “Divodāsa, the king of the earth, was a mine of traditions about discipline and virtue.”

<sup>299</sup> Verses about the use of Venomous Virgins as a weapon do not appear in the Nepalese manuscripts. Cf. **wuja-2003**. This material is present in the commentary of Gayadāsa.

<sup>300</sup> The verb √ śvas is conjugated as a first class root in the Nepalese manuscripts.

- by experts, who belongs to a good family, is orthodox, sympathetic, not emaciated, and always busy.
- 12–13 The kitchen should be constructed at a recommended location and orientation. It should have a lot of light,<sup>301</sup> have clean utensils and be staffed by men and women who have been vetted.<sup>302</sup>
- 17–18ab The chefs, bearers (*voḍhāra*), and makers of boiled rice soups and cakes and whoever else might be there, must all be under the strict control of the doctor.<sup>303</sup>
- 18cd–19ab An expert knows people’s body language (*iṅgita*) through abnormalities in voice, movement and facial expression. He should be able to identify a poisoner by the following signs.
- 19cd–23 Wanting to speak, he gets confused, when asked a question, he never arrives at an answer, and he talks a lot of confused nonsense, like a fool. He laughs for no reason, cracks his knuckles and scratches at the ground. He gets the shakes and glances nervously from one person to another. His face is drained of colour, he is grimy (*dhyāma*) and he cuts at things with his nails.<sup>304</sup> A poisoner goes the wrong way and is absent-minded.
- 25–27 I shall explain the signs to look for in toothbrush twigs, in food and drink as well as in massage oil (*abhyariga*) and combs (*avalekhana*); in dry rubs (*utsādana*) and showers, in decoctions (*kaṣāya*) and massage ointment (*anulepana*); in garlands (*sraja*), clothes, beds, armour and ornaments; in slippers and footstools, and on the backs of elephants and horses; in nasya (*snuff*), inhaled smoke (*dhūma*), eye make-up (*añjana*), etc., and any other things which are commonly poisoned. Then, I shall also explain the remedy.
- 28 Flies or crows or other creatures that eat a poisonous morsel (*bali*) served from the king’s portion, die on the spot.

Cf.  
Arthaśāstra  
1.21.8.

301 We read महच्छुचिः with the Nepalese manuscripts and against the vulgate’s महच्छुचि. We understand शुचिस् as a neuter noun meaning “light” following apte-prac.

302 Verses detailing the ideal staff are omitted in the Nepalese manuscripts. Cf. Su 1938: 560 wuja-2003.

303 The word सौपोदनैकपूपिक “chefs for the boiled rice soups and cakes” is grammatically interesting. The term सूपोदन (as opposed to सूपौदन) is attested in the *Bodhāyanīya-grhyasūtra* 2.10.54 (shas-1920). More pertinently, perhaps, सूपोदन is attested in the Bower Manuscript, part II, leaf 11r, line 3 (hoer-bowe).

304 The word ध्याम is glossed by Ḍalhaṇa (in a variant reading) as someone who is the colour of dirty clothes 5.1 (Su 1938: 560).

- 29 Such food makes a fire crackle violently, and gives it an overpowering colour like a peacock's throat.
- 30–33 After a chukar partridge looks at food which has poison mingled with it, its eyes are promptly drained of colour; a peacock pheasant drops dead. A koel changes its song and the common crane rises up excitedly.<sup>305</sup> It will excite a peacock and the terrified parakeet and the hill myna screech. The swan trembles very much, and the racket-tailed drongo churrs.<sup>306</sup> The chital deer sheds tears and the monkey releases excrement.<sup>307</sup>
- 34cd Vapour rising from tainted food gives rise to a pain in the heart, it makes the eyes roll, and it gives one a headache.<sup>308</sup>
- 35, 36cd In such a case, an errhine and a collyrium that are costus, ??, *spikenard* and honey (*madhus*);<sup>309</sup> a paste of sandalwood on the heart may also provide relief.<sup>310</sup>

305 The verb अर्च्छति “rises up” is a rare form best known from epic Sanskrit (ober-2003). The transmitted form क्रोञ्च is obviously a colloquial version of Sanskrit क्रौञ्च. Commenting on 1.7.10 (Su 1938: 31), Ḍalhaṇa interestingly gives the colloquial versions of several Sanskrit bird names, even singling out pronunciation in the specific location of Kānyakubja. For क्रौञ्च he says that people pronounce it कुरञ्च and कौञ्चि. The form कोञ्च is found in Pāli (see cone-dict, who notes that Ardhamaṅgadhī has the same form). Elsewhere, Ḍalhaṇa calls the bird क्रौञ्चिर, क्रौञ्चि, and कैचर (1.46.105 (Su 1938: 223), 6.31.154 (Su 1938: 684) and (6.58.44 (Su 1938: 790) respectively).

306 Ḍalhaṇa seemed confused about the racket-tailed drongo (भृङ्गराज). He called it a generic drongo (भ्रमरक), a word that can also mean “bee,” (dave), and then said that it is like the black drongo (धूम्याट) (dave) and that people call it “the king of birds.”

307 MS Kathmandu KL 699 reads “bull (वृषभ)” for “Chital deer (पृषत).” The latter may perhaps be mistaken for the former in the Newa script, although the reading of MS Kathmandu KL 699 is hard to read at this point.

308 “Tainted” translates उपक्षिप्त. The word’s semantic field includes “to hurl, throw against,” and especially “to insult verbally, insinuate, accuse.” The commentator Ḍalhaṇa glossed the term as, “spoiled food given to be eaten” (विदूषितस्यान्नस्य भोक्तुं दत्तस्य), but he noted that some people read “उखाक्षिप्त” or “thrown into a pan.” Other translators have commonly translated it as “served,” perhaps influenced by Ḍalhaṇa’s “given (दत्त).”

309 The vulgate supplies another phrase and verb at this point that is not present in the Nepalese transmission, but that makes the text flow more easily.

310 sing-1972 discussed the difficulties in identifying लामज्ज, a plant cited more often in the *Suśrutasaṃhitā* than in the *Carakasamhitā*; Ḍalhaṇa adopted the common view that it is a type of *uśīra* or vetiver grass. The grammatical neuter form मधुस् “sweetness” of the Nepalese manuscripts is less common than neuter मधु “honey, sweetness, liquorice.”

- 37 Held in the hand, it makes the hand burn, and the nails fall out. In such a case, the ointment (*pralepa*) is **beautyberry**, **velvet-mite**, soma and **blue water-lily**.<sup>311</sup>
- 38–39 If he eats that food, through inattention or by mistake, then his tongue will feel like a pebble (*aṣṭhīlā*) and it will lose its sense of taste. It stings and burns, and his saliva (*śleṣman*) dribbles out.<sup>312</sup> In such a case, he should apply the treatment recommended above for vapour (*bāṣpa*), and what will be stated below under “toothbrush twigs”.<sup>313</sup>
- 40 On reaching his stomach, it causes stupor (*mūrcchā*), vomiting, the hair stands on end, there is distension, a burning feeling and an impairment of the senses.<sup>314</sup>
- 41 In this case, vomiting must quickly be induced using the fruits of **emetic nut**, **gourd**, **red gourd**, and **luffa**, taken with milk and **watered butter-milk**, or alternatively with rice-water.
- 42 Reaching the intestines (*pakvāśaya*), it causes a burning feeling, stupor,

311 “Beautyberry” (*Callicarpa macrophylla* Vahl.) is one identification of श्यामा, but vaidyas and commentators have different ideas about the plant’s identity (see glossary). On translating इन्द्रगोप as “velvet-mite,” see **lien-1978**. Ḍalhaṇa’s remarks show that he had a reading इन्द्रगोपा before him, and he tries to explain इन्द्रा and गोपा as separate plants. But he also says that some people read इन्द्रगोप.

Ḍalhaṇa curiously parsed the name सोमा (f.) out of the compound; this feminine noun is almost unknown to Ayurvedic literature. Some dictionaries and commentators consider it a synonym for गुडूची, others for ब्राह्मी or चन्द्रतरु. Ḍalhaṇa also mentioned that some people think the word refers to the soma creeper (सोमलता), which might explain his choice to take the word as feminine. But the compounded word is far more likely to be सोम (m.), the well-known mystery plant (**wuja-2003**). If this can be taken as rue (*Ruta graveolens*, L.), as some assert, one can point to a pleasing passage in Dioscorides where rue plays an antitoxic role: “...it is a counterpoison of serpents, the stinging of Scorpions, Bees, Hornets and Wasps; and it is reported that if a man be anointed with the juice of the Rue, these will not hurt him; and that the serpent is driven away at the smell thereof when it is burned; insomuch that when the weasel is to fight with the serpent she armeth herself by eating Rue, against the might of the serpent” (**wren-1956osba-dios**).

312 The word अष्टील is normally feminine. The Nepalese manuscripts read it with a short अ- ending. Gayadāsa noticed that some manuscripts read अष्टील with a short -अ ending (MS Bikaner RORI 5157, f. 5v:7–8) and Ḍalhaṇa reproduced his observation. The vulgate reading “from his mouth (चास्यात्)” is more obvious (*lectio faciliior*), but is not attested in the Nepalese manuscripts.

313 Poisoned toothbrushes are discussed in verses 48 ff. below.

314 I translate मूर्च्छा in the light of the metaphors discussed by **meul-2011**, that include thickening and losing consciousness.

- diarrhoea, thirst, impairment of the senses, flatulence (*āṭopa*) and it makes him pallid and thin.
- 43 In such a case, purgation with the fruit of indigo (*nīlī*), together with ghee, is best. And ‘slow-acting poison antidote (*dūṣṭviṣāri*)’ should be drunk with honey and curds (*dadhi*).<sup>315</sup>
- 44 When poison is in any liquid substances such as milk, wine or water, there are various streaks, and foam and bubbles form.
- 45 And no reflections are visible or, however, if they can be seen once more, they are distorted, fractured, or tenuous and distorted too.<sup>316</sup>
- 46 Vegetables, soups, food and meat are soggy and tasteless. They seem to go stale suddenly, and they have no aroma.
- 47 All edibles lack aroma, colour or taste. Ripe fruits rapidly rot (*pra√kuth*) and unripe ones ripen.<sup>317</sup>
- 48 When a toothbrush twig has poison on it, the bristles are corroded and the flesh of the tongue, gums and lips swells up.<sup>318</sup>
- 49 Then, once his swelling is lanced, one should rub (*pratisāraṇa*) it with fire-flame bush flowers jambul, mango stones and chebulic myrobalan fruit mixed with honey.<sup>319</sup>
- 50 Alternatively, the rubbing (*pratisāraṇa*) can be done with either the roots of sage-leaved alangium, the bark of blackboard tree or siris seeds.<sup>320</sup>

I'm still unhappy about this verse.

Mention this in the introduction as an example of the scribe knowing the vulgate.

fn about sadyas+

<sup>315</sup> The ‘slow-acting poison’ is discussed at 5.2.25 ff. (*Su* 1938: 565).

<sup>316</sup> Both Nepalese witnesses read विकृत (distorted) twice, which is tautologous. In the first occurrence both read विकृता without proper termination. One might read the sandhi in the second occurrence as or not distorted (*vāvikṛtā*), but this gives no better sense. The scribe of MS Kathmandu NAK 5-333, apparently the original hand, added in the margin the alternate reading “double (*yamalā*)” as in the vulgate. Perhaps the scribe too was troubled by the tautology. It is also evidence that he was aware of a witness with variant readings similar to the vulgate. We emend for grammar but retain the *lectio difficilior*.

<sup>317</sup> The root √कुथ “stink, putrify, rot” is apparently known only from its few uses in the *Suśrutasaṃhitā*.

<sup>318</sup> Gayadāsa and Ḍalhaṇa pointed out that “tooth socket (दन्तवेष्ट)” and “gum (दन्तमांस)” have the same meaning (2.16.14–26 (*Su* 1938: 331–332)).

<sup>319</sup> This recipe is different from the vulgate.

<sup>320</sup> The spelling of the name अङ्गोल्ल varies अङ्गोट, अङ्गोठ, अङ्गोल (*gvdb*); Ḍalhaṇa noted that the form अङ्गोल्ल is a colloquialism (1.37.12 (*Su* 1938: 161)). The sentence is awkward and we have emended शिरीषमाषक to be a plural, as in the vulgate, rather than the ablative singular of the Nepalese witnesses. We follow Ḍalhaṇa in interpreting the compound to refer to the distinctive bean-like siris seeds, rather than to mung beans



- 51ab One should give advice about a poisoned tongue-scraper or mouth-wash (*kavala*) in the same way as for a toothbrush twig.
- 51cd Massage oil that has been laced with poison is slimy, thick and discoloured.
- 52 When the massage oil has been contaminated with poison, boils arise, pain, a discharge (*srāva*), inflammation of the skin, and sweating.<sup>321</sup> And the flesh splits open.
- 53–54 In such a case, sandalwood, *crape jasmine*, *costus*, and *cuscuta grass*, *bamboo leaves*, *heart-leaved moonseed* and *heart-leaved moonseed*, *white clitoria*, *sacred lotus*, and *Indian barberry* should be made into an ointment (*anulepana*) for the patient, who has been sprinkled with cold water. That is also recommended as a drink with the juice and leaves of *wood apple*.<sup>322</sup>
- 55 In the case of a dry rub (*utsādana*), a shower (*parīṣeka*), an infusion, a massage ointment (*anulepana*), or in beds, clothes, or armour, the physician should understand that it is the same as for oil massage (*abhyāṅga*).<sup>323</sup>
- 56–58 When a comb has poison in it, the hair falls out, the head aches and blood oozes from the follicles (*kha*) and lumps (*granthi*) appear on the head. In such a case, one should repeatedly apply an ointment of black earth soaked with bear's bile,<sup>324</sup> ghee, *beautyberry*,<sup>325</sup> *black creeper*, and *amaranth*. Good alternatives are either the fluid extract of cow-dung, or the juice of *jasmine*, the juice of *woodrose*, or household soot.<sup>326</sup>
- 59 If either massage oil for the head, or a helmet for the head, in a wash,

Bear's bile  
instead of  
deer's bile.

(5.1.50 (Su 1938: 562)).

321 The feminine स्फोट for “boils” is unattested.

322 This compound could be interpreted as “wood apple juice and *cassia cinnamon*.”

Note that this recipe is differs from that of the vulgate, which requires urine.

323 See verse 52 above.

324 Ḍalhaṇa comments here that ‘bile is that fluid which goes along inside the tube attached to the liver’ (कालखण्डलग्नलिकामध्यगतजलं पित्तम्) 5.1.57 (Su 1938: 562).

325 See note 311.

326 The plant identifications in this passage follow Ḍalhaṇa's glosses, although he noted a difference of opinion on the identity of *woodrose* (lit. “mouse-ear”).

The expression धूमो वागारसंज्ञितः ‘...or the smoke termed “house”’ is commonly interpreted by translators and in Ayurvedic dictionaries as ‘household soot,’ and this does seem to be the meaning, in context. The term was comprehensively discussed by meul-2008. Cf. note 420, p. 143.



turban, or garlands that are contaminated with poison, then one should treat it in the same way as a comb.

60–61 When face make-up is poisoned, the face becomes dark and has the symptoms found with poisoned massage oil. It is covered with spots (*kaṇṭaka*) that are like lotus-spots (*padminikaṇṭaka*).<sup>327</sup> In this case, the drink is honey and ghee, and the ointment (*pralepa*) is sandalwood with ghee, curds, honey, *verbena*, *scarlet mallow* and *hogweed*.<sup>328</sup>

62–63ab Elephants and the like become ill and they dribble saliva. And the rider gets spots (*sphoṭa*) and a discharge on his scrotum, penis, and rectum. In this case, one prescribes the same therapy as for poisoned massage oil for both the rider and the mount.

63cd–65ab When there is poison in snuff (*nasya*) or smoke, the symptom (*liṅga*) is blood coming out of the apertures of the head (*kha*), a headache, a flow of mucus (*kapha*) and impairment of the senses. In such a case, ghee of cows etc., boiled up with their milk and *Himalayan monkshood*, is prescribed, with *henna*, as a cold drink or er-rhine.

65cd–66 Flowers lose their fragrance and colour, and wilt. On smelling them, he gets a headache and his eyes fill with water. In this case, the treatment is what was proposed above for vapour (*bāṣpa*) and that which is traditional for face make-up.

67–68 When it is in ear-oil, there is degeneration in the ear, and painful swelling. There is also a discharge from the ear and in such a case it needs to be irrigated (*pratipūrana*) promptly with ghee and honey. Extracted juice (*svarasa*) of *wild asparagus* and very cold juice of *white cutch tree* are also recommended as something good.<sup>329</sup>

69 When poison is mixed in with eye make-up (*añjana*), he gets tears and rheum (*upadeha*), with a burning feeling, pain, faulty vision (*dṛṣṭivibhrama*), and possibly even blindness.<sup>330</sup>

<sup>327</sup> See the description of this condition at 2.13.40 (*Su 1938*: 323), where the skin on the face is characterized as having pale circular patches that are itchy and have spots.

<sup>328</sup> The common plant-name पुनर्नवा is read as पुनर्णवा in both Nepalese witnesses. This unusual form is technically-speaking legal according to Pāṇini 8.4.3, but is not attested in published texts. पुनर्णवा is found rarely in some other Nepalese manuscripts such as the *Brahmayāmala* (a.k.a. *Picumata*, 44.81, transcription thanks to Shaman Hatley), and elsewhere (e.g., in *gana-1920*, where it is the name of a constellation).

<sup>329</sup> The syntax of the Nepalese version is slightly unclear, but the vulgate has smoothed out the difficulties.

<sup>330</sup> The term translated as “faulty vision” could also mean “rolling eyes.” “Eye make-up”

punarnavā  
in the N &  
K MSS

śṛita for  
śṛta

explain  
more

Medical difference from Sharma.

example where the vulgate clarifies that these should be used separately; appears to be a gloss inserted into the vulgate text.

70–71 In this case, one must immediately drink ghee and have it also in an eyewash (*tarpaṇa*) with long pepper. One should have an eye ointment (*añjana*) of the juice of periploca of the woods and have the extract (*niryāsa*) of three-leaved caper, wood apple and periploca of the woods and the flower of marking-nut tree.

72–73 Because of poisoned slippers there will definitely be a swelling, numbness (*svāpa*), a discharge (*srāva*) and an outbreak of spots (*sphoṭa*) on the feet. One should clean (*pra√sādh*) footstools together with slippers.

74 Ornaments lose their lustre, and they do not shine as they used to. They damage their respective locations with burning, sepsis (*pāka*), and fisting (*avadāraṇa*).<sup>331</sup>

75ab One should apply the stated procedure for massage oil (*abhyāṅga*) to poisoned slippers and ornaments.

75cd–76 In the case of the affliction (*upasarga*) by poison which has been described above, starting from ‘vapour’ and ending with ‘ornaments,’ the physician should observe the side-effects (*upadrava*) and then prescribe the therapy called the Great Fragrance (*mahāsugandha*) antidote, which I shall describe.<sup>332</sup>

77–78ab He should prescribe it in drinks, liniments (*ālepana*), errhines (*nasya*), and in eye ointment (*añjana*). Also, he should use sharp purgatives and emetics. If bleeding is present, he should have the indicated veins pierced.

78cd–79ab If either purging nut or a fern is tied on to the King’s wrist, then all food that is mixed with poison will be rendered free of poison.<sup>333</sup>

79cd–80 He should always guard his heart when amongst people who are not

is normally made of Indian barberry.

331 The reading अवदारुण in MS Kathmandu KL 699 is not attested elsewhere in Sanskrit literature. On “sepsis” for पाक, see wuja-2003.

332 This antidote is indeed described later, in dramatic terms, at 5.6.14–27 (Su 1938: 581). A recipe with eighty-five ingredients including cow’s bile, it is praised as chief of all antidotes, one that can drag the patient back from the very jaws of death, from even the poisonous fangs of Vāsuki. A useful survey of the meanings of उपसर्ग (“affliction”) was given by HIML: IB, 332

333 In early Ayurvedic literature, the plant अजरुहा is mentioned only here and its identity is unknown. It may be a fern of the Nephrodium family, according to gvdB. Ḍalhaṇa, on 5.1.78 (Su 1938: 563), cited a description of the two plants from the little-known authority Uśanas (HIML: IA, 660 et passim) who described अजरुहा as a white root with spots on it that looks like collyrium when it is split; when drunk with sandalwood it causes poison to be digested.

The two uses of prāpta are hard to translate. prāptāh → kṣiprām is an example of the vulgate banalizing the Sanskrit text to make sense of a difficult passage.

√vyadh not √vedh (also elsewhere and for the ears), causative optative.

- his friends.<sup>334</sup> Before eating, he should drink the kinds of ghee called “Invincible” and “Immortal”.<sup>335</sup> He should drink ghee (*sarpiṣ*), honey, curds (*dadhi*), milk (*payas*), or cold water.
- 81 He should consume monitor lizard, peacock, mongoose, chital deer, and blackbuck too, that destroy poison, and their juices.
- 82 As discerning person should add well-crushed black creeper,<sup>336</sup> liquorice, and sugar to the meats of monitor lizard, mongoose and blackbuck too.
- 83 Add sugar and Himalayan monkshood to peacock flesh, together with ginger. And for meat from a chital deer, he should add long pepper, with ginger.
- 84ab A cold neem broth with honey and ghee is wholesome too.
- 84cd A discerning person should partake of hard and soft foods that counteract poison.<sup>337</sup>
- 85 If poison might have been drunk, a person who has protected his heart should make himself vomit using long pepper, liquorice, honey, sugar, sugar cane juice, and water.

The first chapter in the Kalpas.

<sup>334</sup> The *Carakasamhitā* described “protecting the heart” (हृदयावरण) as drinking several sweet, oily drinks to surround the heart and keep it safe (6.23.46 (Ca 1941: 574)). Ḍalhaṇa on 5.1.79–81 (Su 1938: 563) explained it as taking a number of anti-toxic medicines, including those listed in the present passage, in order to cover or hide (प्रच्छादन) the heart. Note that the Nepalese version reads the opposite of the vulgate: one should guard one’s heart when amongst enemies, not friends. This is far more logical; it is also the reading known to the 1.8.89a (As 1980: 79).

<sup>335</sup> These ghee compounds are described in later chapters: see 5.2.47–49 (Su 1938: 566) and 5.6.13 (Su 1938: 581).

<sup>336</sup> Ḍalhaṇa on 5.1.82 (Su 1938: 563) equated this with turpeth.

<sup>337</sup> On this expression, see yagi-1994.



# Kalpasthāna 2: Poisonous Plants

## Introduction

This section begins with several lists of poisonous plants. The Sanskrit names for these plants are mostly not standard or familiar from anywhere in Sanskrit or ethnobotanical literature. It remains a historical puzzle why these particular names are so difficult to interpret. However, we are not the first to encounter these difficulties. In the twelfth century, the learned commentator on the text, Ḍalhaṇa, remarked,

In spite of having made the greatest effort, it has been impossible to identify these plants. In the Himalayan regions, Kirātas and Śabarās are able to identify them.<sup>338</sup>

Ḍalhaṇa also recorded variant readings of these poison names from the manuscripts that he consulted of the lost commentary of Gayadāsa (fl. c. CE 1000). The identities of these poisons have been in doubt for at least a thousand years.<sup>339</sup> Identifications have in many cases been equally impossible for us today.

One path for exploration in this situation is to attempt to reverse-engineer some identifications by considering the known toxic plants of India.<sup>340</sup>

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<sup>338</sup> After *Suśrutasaṃhitā*, *kalpasthāna* 2.5 (Su 1938: 564). From the view of Sanskrit authors, Kirātas and Śabarās were tribal peoples. The eleventh-century author Bhikṣu Govinda, however, cast his treatise as a dialogue with a Kirāṭa king called Madana who was a master of the alchemical art (HIML: IIA, 620).

<sup>339</sup> See wuja-2003.

<sup>340</sup> Valuable reference sources on Indian plant toxicology in general include pill-2013 and barc-2008.

## Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.<sup>341</sup>

## Translation

- 1 And now I shall explain what should be known about stationary poisons.<sup>342</sup>
- 3 It is said that there are two kinds of poisons, stationary (*sthāvara*) and mobile (*jaṅgama*). The former dwells in ten sites, the latter in sixteen places.
- 4 Traditionally, the ten are: root, leaf, fruit, flower, bark, milky sap (*kṣīra*), pith (*sāra*), resin (*niryāsa*), the elements (*dhātu*), and the tuber.
- 5 In that context,
  - the eight root-poisons are:<sup>343</sup>
    1. liquorice (?),<sup>344</sup>
    2. sweet-scented oleander,<sup>345</sup>
    3. jequirity,<sup>346</sup>
    4. false daisy,<sup>347</sup>

<sup>341</sup> HIML: IA, 290–291.

<sup>342</sup> No reference is made to Dhanvantari (**birc-2021**). “Stationary” here is a term contrasted with “moving,” and signifies plants as opposed to animals and insects.

<sup>343</sup> Some South Asian plants with poisonous roots that we would have expected to see in this list include *Croton tiglium*, L., *Calotropis* spp., *Citrullus colocynthus* L. Schrad., and *Ricinus communis* L. (**pill-2010**).

<sup>344</sup> Liquorice eaten in excess can be poisonous, but it is unlikely to be the plant intended here. **gvdb** noted that the poisonous root mentioned in this passage, “remains to be identified.”

<sup>345</sup> The roots of sweet-scented oleander are highly toxic, as are most parts of the plant (**pill-2019**).

<sup>346</sup> Jequirity contains a dangerous toxin called Abrin in its seeds and to a lesser extent in its leaves, but apparently not in its roots or bulb. Abrin is not harmful if eaten, but an infusion of the bruised (not boiled) seeds injected or rubbed in the eyes can be fatal (NK). The dose can be quite small.

<sup>347</sup> The plant is usually called just *bhaṅgurā* without the prefix *su-* “good.” However, there is no reported toxicity associated with *E. prostrata*. The vulgate reads सुगन्धा (**snakeroot**).

5. (?),<sup>348</sup> and ending with
  6. leadwort,<sup>349</sup>
  7. country sarsaparilla (?),<sup>350</sup> and
  8. medhshingi,<sup>351</sup>
- the leaf-poisons include:
    - aconite leaf (?),
    - drum-giver (?),
    - thorn apple, and
    - big thorn apple;
  - the fruits of items like: jequirity, marking-nut tree, and poison-altar (?) are
    - kumudavati (*kumadavati*)<sup>i</sup>,
    - reṇuka (?)<sup>ii</sup>,
    - kurūkaka (?)<sup>iii</sup>,
    - ‘little bamboo’ (*veṇuka*)<sup>iv</sup>,<sup>352</sup>,

348 This poisonous root cannot at present be securely identified. Similar-sounding candidates include *karkaṭaka*, *karahāṭa* (emetic nut), and *karaghāṭa*, but since this is a prose passage, there would be no reason to alter the word to fit a metre. **moni-sans** cite an unknown lexical source that equates *karaṭa* (mn.) with safflower (*Carthamus tinctorius*, L.), but this plant does not have a poisonous root.

349 The roots of both rose and white leadwort are very toxic.

350 The text reads masculine *ananta*, which is not a plant name. Gayī’s commentary on 5.2.5 (Su 1938: 564) noted a variant reading of feminine *anantā* in place of *gargaraka*, earlier in the compound. But the feminine *anantā*, country sarsaparilla, is not a poisonous plant.

351 **meul-sear** argued that our text reads a masculine or neuter noun *vijaya*, which never signifies cannabis. However, unlike the vulgate, the unanimous readings of the Nepalese manuscripts give feminine *vijayā*. Nevertheless, even the feminine form only started to signify *Cannabis sativa* L. after the end of the first millennium (**meul-sear**; **wuja-cann**; **mchu-2021**). The *Sauśrutanighaṇṭu* gives a number of synonyms for *vijayā*, almost none of which have any poisonous parts (**suve-2000**). But one of them, *viṣāṇī* (also *meṣaśṛṅgī*), is sometimes equated with *Dolichandrone falcata* (DC.) **Seemann (adps)**, a plant used as an abortifacient and fish poison (**NK**). This identification is tenuous.

352 Not poisonous.

i unknown; see ?

ii ?; see *Piper aurantiacum* Wall. (**NK**) is not poisonous.

iii ?; see ?

iv *Bambusa bambos*, Druce?; see **NK** #307

- thorn apple (*karambha*)<sup>v</sup>,
- 'big thorn apple' (*mahākarambha*)<sup>vi</sup>,
- 'pleaser' (*nandanā*)<sup>vii</sup>,
- 'crow' (*kāka*)<sup>viii</sup>,
- the flower-poisons include those of:
  - rattan (*vetra*)<sup>ix</sup>,
  - wild chinchona (*kādamba*)<sup>x</sup>,
  - black pepper (*vallīja* → *marica*)<sup>xi</sup>,
  - thorn apple (*karambha*)<sup>xii</sup>, and
  - big thorn apple (*mahākarambha*)<sup>xiii</sup>;
- the seven bark, pith (*sāra*) and resin (*niryāsa*) poisons are:
  - 'gutboiler' (*antrapācaka*)<sup>xiv</sup>,
  - 'blade' (*kartarīya*)<sup>xv</sup>,
  - wild mustard (*saurīyaka*)<sup>xvi</sup>,
  - emetic nut (*karaghāṭa* → *karahāṭa*? → *madana*)<sup>xvii</sup>,
  - thorn apple (*karambha*)<sup>xviii</sup>,
  - wild asparagus (*nandana* → *bahuputrā*?)<sup>xix</sup>, and

v *Datura metel*, L.; see AVS 2.305 (cf. *Abhidhānamañjarī*), NK #796 ff., Potter 292 f., ADPS 132.

vi *Datura metel*, L.?; see AVS 2.305 (cf. *Abhidhānamañjarī*), NK #796 ff., Potter 292 f., ADPS 132.

vii ?; see ?

viii ?; see ?

ix *Calamus rotang*, L.; see AVS 1.330, NK #413

x *Anthocephalus cadamba*, Miq.; see NK #204

xi *Piper nigrum*, L.?; see NK #1929; Rā.6.115, Dha.4.85, Dha.2.88

xii *Datura metel*, L.; see AVS 2.305 (cf. *Abhidhānamañjarī*), NK #796 ff., Potter 292 f., ADPS 132.

xiii *Datura metel*, L.?; see AVS 2.305 (cf. *Abhidhānamañjarī*), NK #796 ff., Potter 292 f., ADPS 132.

xiv unknown; see ?

xv unknown; see ?

xvi *Cleome viscosa*, L.? (cf. Rā.4.144); see AVS 2.116, NK #615

xvii *Randia dumetorum*, Lamk.; see NK #2091

xviii *Datura metel*, L.; see AVS 2.305 (cf. *Abhidhānamañjarī*), NK #796 ff., Potter 292 f., ADPS 132.

xix *Asparagus racemosus*, Willd.; see ADPS 441, AVS 1.218, NK #264, IGP 103, IMP 4.2499ff., Dymock 482ff.



- munj grass (*nārācaka*)<sup>xx,353</sup>
- the three milky sap (*kṣīra*)-poisons are:
  - purple calotropis (*kumudaghñī* → *arka*?)<sup>xxi,354</sup>
  - oleander spurge (*snuhī*)<sup>xxii</sup>, and
  - ‘web-milk’ (*jālakṣīri*)<sup>xxiii</sup>;
- the two element (*dhātu*)-poisons are:
  - ‘foam-stone’ (*phenāśma*)<sup>xxiv</sup>, and
  - orpiment (*haritāla*)<sup>xxv,355</sup>
- the thirteen tuber-poisons are:
  - jequirity (*kālakūṭa*)<sup>xxvi,356</sup>
  - wolfsbane (*vatsanābha*)<sup>xxvii</sup>,

353 The bark of wild asparagus (*Asparagus racemosus*, Willd.) is toxic.

354 The name of this poison, *kumuda-ghñī*, means ‘lotus killer’. In Sanskrit literature, the *kumuda* lotus is associated with the moon, since it blossoms by night. Since the sun causes this lotus to close, it is therefore an ‘enemy’ of the lotus. One of the chief words for the sun, *arka*, is also the name of *Calotropis gigantea*, which indeed has a milky juice which is a violent purgative, poison and abortifacient.

355 **duft-1922** conjectured that ‘foam-stone’ may be impure white arsenic obtained by roasting orpiment.

356 The much later (perhaps sixteenth century) alchemical *Rasaratnasamuccaya* of pseudo-Vāgbhaṭa (21.14) says that the *kālakūṭa* poison, here translated as ‘jequirity’, is similar to ‘*kākacañcu*’ or ‘Crow’s Beak’, which is indeed a name for the plant jequirity or *Abrus precatorius*, L., more commonly called *guñjā* (not to be confused with *gañjā*). The black seed-pod is described as having a ‘sharp deflexed beak’ in botanical descriptions, so the Sanskrit name is quite graphic and appropriate. The poisonous scarlet seeds of *A. precatorius* can have a distinct black dot or tip, which could perhaps be translated ‘*kāla-kūṭa*’, or ‘Black Tip’.

The *Rājanighaṇṭupariśiṣṭa* (9.35) gives *kālakūṭaka* as a synonym for *kāraskara*, or *Strychnos nux-vomica*, L., whose seeds are notoriously poisonous.

xx *Saccharum bengalense*, Retz.?; see NK #2184

xxi *Calotropis gigantea*, (L.) R. Br.; see ADPS 52, AVS 1.341, NK #427, Potter 63

xxii *Euphorbia neriifolia*, L., or *E. antiquorum*, L.; see ADPS 448, AVS (2.388), 3.1, NK #988, IGP 457b

xxiii unknown; see ?

xxiv unknown; see ?

xxv *Arsenii trisulphidum*; see NK v. 2, p. 20 ff.

xxvi *Abrus precatorius*, L.? Cf. RRS 21.14.; see AVS 1.10, NK #6, Potter 168.

xxvii *Aconitum napellus*, L.; see AVS 1.47, NK #42, Potter 4 f.

- Indian mustard (*sarṣapa*)<sup>xxviii</sup>,
- leadwort (*pālaka* → *citraka*)<sup>xxix</sup>,
- ‘muddy’ (*kardama*)<sup>xxx</sup>, the
- ‘Virāṭa’s plant’ (*vairāṭaka*)<sup>xxxi</sup>,
- nutgrass (*mustaka*)<sup>xxxii</sup>,
- atis root (*śṛṅgīviṣa*)<sup>xxxiii</sup>,
- sacred lotus (*prapuṇḍarīka*)<sup>xxxiv</sup>,
- radish (*mūlaka*)<sup>xxxv</sup>,
- ‘alas, alas’ (*hālāhala*)<sup>xxxvi</sup>,
- ‘big poison’ (*mahāviṣa*)<sup>xxxvii</sup>, and
- galls (*karkaṭa*)<sup>xxxviii</sup>.<sup>357</sup>

Thus, there are fifty-five stationary poisons.

- 6 There are believed to be four kinds of wolfsbane, two kinds of *mustaka*, and six kinds of Indian *sarṣapa*. But the rest are said to be unique types.

## The effects of poisons

- 7–10 People should know that root-poisons cause writhing (*udveṣṭana*), ranting (*pralāpa*), and delirium (*moha*), and leaf-poisons cause yawning,

357 Leadwort root is a powerful poison. Nutgrass is tuberous, but non-toxic. Atis has highly toxic tuberous roots. Neither sacred lotus nor galls are toxic. The ‘alas, alas’ poison (*hālāhala*) is the mythical poison produced from the churning of the ocean at the time of creation: it occurs in medical texts such as the present one, and commentators identify it with one or other of the lethal poisons such as wolfsbane or jequirity. **agra-indi** makes the intriguing suggestion that the word *hālāhala*, possibly to be identified with Pāṇini’s *hailihila* (P.6.2.38), may be of Semitic origin, although his evidence seems uncertain (**stei-pers** cites Persian *halāhil* ‘deadly (poison)’ as a loan from Sanskrit). **mayr-kurz** also cites a claim for an Austro-Asiatic origin for the word.

xxvi **B** *Brassica juncea*, Czern. & Coss.; see AVS 1.301, NK #378

xxix **P** *Plumbago zeylanica* (indica? rosea?), L.; see Rā. 6.124, ADPS 119, NK #1966, 1967

xxx unknown; see ?

xxxi unknown; see ?

xxxii **C** *Cyperus rotundus*, L.; see ADPS 316, AVS 2.296, NK #782

xxxiii **A** *aconitum heterophyllum*, Wall. ex Royle; see AVS 1.42, NK #39

xxxiv **N** *Nelumbo nucifera*, Gaertn.; see Dutt 110, NK #1698

xxxv **R** *Raphanus sativus*, L.; see NK #2098

xxxvi unknown; see Cf. Soḍhalanighantu p.43 (sub bola) = stomaka = vatsanābha

xxxvii unknown; see ?

xxxviii **R** *Rhus succedanea*, L.; see NK #2136

writhing, and wheezing (*śvāsa*).

Fruit-poisons cause swelling of the scrotum, a burning feeling and writhing. Flower-poisons will cause vomiting, distension (*ādhmāna*) and sleep (*svāpa*).

The consumption of poisons from bark, pith (*sāra*) and resin (*niryāsa*) will cause foul breath, hoarseness (*pāruṣya*), a headache, and a discharge of phlegm (*kapha*).<sup>358</sup>

The milky sap (*kṣīra*)-poisons make one froth at the mouth, cause loose stool, and make the tongue feel heavy.<sup>359</sup> The element (*dhātu*)-poisons give one a crushing pain in the chest, make one faint and cause a burning feeling on the palate.

These poisons are classified as ones which are generally speaking lethal after a period of time.

#### 11–17 Symptoms of tuber poisoning

The tuber-poisons, though, are severe. I shall talk about them in detail. With jequirity (*kālakūṭa*)<sup>xxxix</sup>, there is numbness and very severe trembling. With wolfsbane (*vatsanābha*)<sup>xl</sup>, there is rigidity of the neck, and the faeces, and urine become yellow.

With *sārṣapa* (*sārṣapa*),<sup>360</sup> the wind becomes defective (*vātavaiguṇya*), there is constipation (*ānāha*), and lumps (*granthi*) start to appear. With leadwort (*pālaka* → *citraka*)<sup>xli</sup>, there is weakness in the neck, and speech gets jumbled.<sup>361</sup>

358 At 1.2.6 (Su 1938: 11), Ḍalhaṇa glosses hoarseness (*pāruṣya*) as *vāgrūkṣatā*, “a rough, dry voice.”

359 At 6.54.10 (Su 1938: 773), Ḍalhaṇa glosses loose stool (*viḍbheda*) as *dravapurīṣatā*, “having liquid stool.”

360 *Sārṣapa* would normally mean “connected with mustard,” and excessive consumption of mustard oil can be harmful. However, the *Sauśrutaniḥṣaṇṭu* (156) gives *rakṣoghṇā* as a synonym for *sārṣapā*. This can be *Semecarpus anacardium*, L.f., which has some poisonous parts.

361 The verse in the Nepalese version ends with a plural verb that does not agree with the dual of the sentence subject.

xxxix *Abrus precatorius*, L.? Cf. RRS 21.14.; see AVS 1.10, NK #6, Potter 168.

xl *Aconitum napellus*, L.; see AVS 1.47, NK #38, Potter 4 f.

xli *Plumbago zeylanica* (indica? rosea?), L.; see Rā. 6.124, ADPS 119, NK #1966, 1967

With the one called ‘muddy’ (*kardama*)<sup>xlii</sup>, there is a discharge (*praseka*), the faeces pour out, and the eyes turn yellow. The ‘Virāṭa’s plant’ (*vairāṭaka*)<sup>xliii</sup> causes pain in the body and illness in the head. Paralysis of one’s arms and legs and trembling are said to be caused by *mustaka* (*mustaka*).<sup>362</sup>

- 15b With great aconite (*mahāviṣa*) one’s limbs grow weak, there is a burning feeling and swelling of the belly.<sup>363</sup>
- 16a With *puṇḍarīka* (*puṇḍarīka*), one’s eyes go red, and one’s belly becomes distended.<sup>364</sup>
- 16b With *mūlaka* (*mūlaka*), one’s body is drained of colour and the limbs are paralysed.<sup>365</sup>
- 17a With *hālāhala* (*Aconite*), a man turns a dark colour (*dhyāma*), and gasps.<sup>366</sup>
- 17b With atis root (*śṛṅgīviṣa*)<sup>xliv</sup>, one gets violent knots (*granthi*) and stabbing pains in the heart.<sup>367</sup>
- 18a With *markaṭa* (*monkey*), one leaps up, laughs, and bites.<sup>368</sup>

362 The substitution in MS NAK 5-333 affecting 15cd is caused by an eye-skip to the word *viṣeṇa* in 2.17. *Mustaka* commonly refers to *Cyperus rotundus*, L.; the root is used in āyurveda but is not poisonous. However other dictionaries list *mustaka* amongst serious poisons, for example *Rājanighaṇṭu* (22 v. 42) and *Rasaratnasamuccaya* 16, v. 80. However, its ancient identity is still doubtful.

363 The poisonous root great poison (*mahāviṣa*) is not clearly identifiable, although *viṣa* is commonly aconite. Verse 6 above notes that there are several kinds of aconite.

364 The word *puṇḍarīka* very commonly means sacred lotus, *Nelumbo nucifera*, Gaertn. The entire plant is edible and cannot be the poison intended here. **gvdb** noted that this poison is unidentified and that it is also listed as a poison in *Carakasaṃhitā*.23.12.

365 The word *mūlaka* very commonly means the radish, *Raphanus sativus*, L. The root is edible and cannot be the poison intended here. **gvdb** noted that this poison is unidentified.

366 Identification of *hālāhala* is uncertain. It may simply be a mythical poison, or its specific identity may have been lost over the centuries. Late *nighaṇṭus* identify it as *stomaka* = *vatsanābha*, i.e., *Aconitum napellus*, L. (*Soḍhalanighaṇṭu* p.43). Ḍalhana on 5.2.17 (*Su* 1938: 564) interprets our “gasps” as “the man laughs and grinds his teeth.” But this gloss is probably displaced and intended to apply to verse 2.18.

367 **gvdb** noted that *vatsanābha* and *śṛṅgīviṣa* are two different varieties of poisonous Aconites that are difficult to distinguish.

368 **gvdb** said of *markaṭa*, “an unidentified vegetable poison.” Cf. **suve-2000** for synonyms

xlii unknown; see ?

xliii unknown; see ?

xliv *Aconitum heterophyllum*, Wall. ex Royle; see AVS 1.42, NK #39

-> ativiṣa

Look up  
the ca. ref-  
erence.

- 18b-19a Experts have said that one should know that the thirteen highly potent tuber-poisons, which are mentioned here, have ten qualities (*guṇa*).
- 19b-20a The ten are:
- dry (*rūkṣa*),
  - hot,
  - sharp,
  - rarified (*sūkṣma*),
  - fast-acting,
  - pervasive (*vyavāyin*),
  - expansive (*vikāsin*),
  - limpid (*viśada*),
  - light, and
  - indigestible.
- 20b Because of dryness, it may cause inflammation of the wind; because of heat it inflames the choler and blood. Because of the sharpness it unhinges the mind, and it cuts through the connections with the sensitive points (*marman*). Because it is rarified it can infiltrate and distort the parts of the body.<sup>369</sup>
- 22 Because it is fast-acting it kills quickly, and because of its pervasiveness it affects one's whole physical constitution (*prakṛti*).<sup>370</sup> Because of its expansiveness it enters into the humour (*doṣa*)s, bodily constituents (*dhātu*)s, and even the impurities. Because it is limpid it overflows, and because it is light it is difficult to treat. Because it is indigestible it is hard to eliminate. Therefore, it causes suffering for a long time.
- 24 Any poison that is instantly lethal, whether it be stationary, mobile, or artificial, will be known to have all ten of these qualities.

### Slow-acting poison

- 25cd-26 A poison that is old or destroyed by anti-toxic medicines, or else dried up by blazing fire, wind, or sunshine, or which has just lost its qualities

that lead to the non-toxic jujube tree.

<sup>369</sup> We read the active *vikaroti* with Ḍalhaṇa against the transmitted passive *vikriyeta*, since it must be the parts of the body that are distorted, not the poison.

<sup>370</sup> Ḍalhaṇa on 5.2.22 (*Su* 1938: 565) explained this as “takes the form of pervading the whole body (*akhiladehavyāptirūpam*).”

- by itself,<sup>371</sup> becomes a slow-acting poison (*dūṣīviṣa*).<sup>372</sup> Because it has lost its potency it is no longer perceived. Because it is surrounded by phlegm (*kapha*) it has an aftermath that lasts for a very long time.
- 27 If he is suffering from this, the colour of his stools changes, he gets sourness and a bad taste with great thirst. Stammering and close to death, wandering about, he may feel faint, giddy, and aroused.<sup>373</sup>
- 28 If it lodges in his stomach (*āmāśaya*), he becomes sick because of wind and phlegm; if it lodges in his intestines (*pakvāśaya*), he becomes sick because of wind and choler. A man's hair and limbs fall away and he looks like a bird whose wings have been chopped off.
- 29a–c If it lodges in one of the body tissues such as chyle (*rasa*), it causes the diseases arising from the body tissues, that have been said to be wrong.<sup>374</sup> and it rapidly becomes inflamed on days that are nasty because of cold and wind.
- 29d–31 Listen to its initial symptoms (*liṅga*): it causes heaviness due to sleep, yawning, disjunction (*viśleṣa*) and horripilation (*harṣa*) and a bruising of the limbs (*aṅgamarda*).<sup>375</sup> Next, it causes intoxication from food (*annamada*) and indigestion, loss of appetite (*arocaka*), the condition of having a skin disease (*koṭha*) with round blotches (*maṇḍala*),<sup>376</sup> dwindling away (*kṣaya*) of flesh, swelling of the feet, hands, and face, the fever called *pralepaka*, vomiting and diarrhoea.<sup>377</sup> The slow-acting poison might cause wheezing, thirst and fever, and it might also cause distension of the abdomen.
- 32 These various disorders are of many different types: one poison may produce madness, while another one may cause constipation (*ānāha*), and yet another may ruin the semen. One may cause emaciation, while

371 Ḍalhaṇa specified that this refers to the ten qualities that are mentioned above (5.2.26 (Su 1938: 565)).

372 Ḍalhaṇa cited this verse at 1.46.83 (Su 1938: 222) while explaining *dūṣīviṣa*.

373 Similar symptoms of slow-acting poison are described at 2.7.11–13 (Su 1938: 296) in the context of contamination dropsy (*duṣyodara*). This this may explain why the vulgate inserted reference to this disease at this point.

374 The expression *ayathāyathoktān* “stated to be unsuitable” is hard to understand here, but is clearly transmitted in the Nepalese version.

375 Ḍalhaṇa 5.2.30ab (Su 1938: 565) glossed “disjunction” as the loss of function of the joints in regard to movement.

376 The last ailment could perhaps be ringworm.

377 The *pralepaka* fever was described by Ḍalhaṇa, at 6.39.52 (Su 1938: 675), as an accumulation of phlegm in the joints. Its symptoms are described in 6.39.54

another pallid skin disease (*kuṣṭha*).

- 33 Something is “corrupted” by repetitively keeping to bad locations, times, foods, and sleeping in the daytime. Or, traditionally, “corrupting poison” (slow-acting poison (*dūṣī-viṣa*)) is so called because it may corrupt (*dūṣayet*) the body tissue (*dhātu*)s.

#### 34- The stages of toxic shock

In the first shock of having taken a stationary poison, a person’s tongue becomes dark brown and stiff, he grows faint, and panics.

- 35 In the second, he trembles, feels exhausted, has a burning feeling, as well as a sore throat. When the poison reaches the stomach (*āmāśaya*), it causes pain in the chest (*hṛd*).
- 36 In the third, his palate goes dry, he gets violent pain (*śūla*) in the stomach (*āmāśaya*), and his eyes become weak, swollen and yellow.
- 37 In the fourth shock, it causes the intestines and stomach to be exhausted (*sāda*), he gets hiccups, a cough, a rumbling in the gut (*antra*), and his head becomes heavy too.
- 38 In the fifth he dribbles phlegm (*kapha*), goes a bad colour, his ribs crack (*parśvabheda*), all his humours are irritated, and he also has a pain in his intestines (*pakvādhāna*).
- 39a In the sixth, he loses consciousness and he completely loses control of his bowels.
- 39b In the seventh, there are breaks in his shoulders, back and loins, and he stops breathing.<sup>378</sup>

#### Remedies for the stages of slow poisoning

- 40 In the first shock of the poison, the physician should make the man, who has vomited and been sprinkled with cold water, drink an antidote (*agada*) mixed with with honey and ghee.
- 41a In the second, he should make the man who has vomited and been purged drink as before;

<sup>378</sup> Here at 5.2.24 ([Su 1938](#): 566) Ḍalhaṇa glossed *sannirodha* as “complete cessation, i.e., of breath” (*sannirodhaḥ samyānnirodhaḥ, ucchvāsasya iti śeṣaḥ*). The manuscripts all read *skanda* where *skandha* must be intended; this confusion is known from Buddhist Hybrid Sanskrit ([edge-1953](#)).



- 41b on the third, drink an antidote and a beneficial nasal medicine (*nasya*) as well as an eye salve (*añjana*).
- 42a In the fourth, the physician should make him drink an antidote that is salt with a little oil.<sup>379</sup>
- 42b In the fifth, he should be prescribed the antidote together with a decoction (*kvātha*) of honey and **liquorice**.
- 43 In the sixth, the cure (*siddhi*) is the same as for diarrhoea. And in the seventh, he perishes.<sup>380</sup>
- 44 In between any one of these shocks, once the above treatment has been done, he should give the patient the following cold gruel (*yavāgū*) together with ghee and honey, that will take away the poison.
- 45–46 A gruel (*yavāgū*) made of the following items in a stewed juice (*niḥk-vātha*) destroys the two poisons: **luffa gourd**,<sup>381</sup> **wild celery**,<sup>382</sup> **velvet-leaf**, **sunflower**,<sup>383</sup> **heart-leaved moonseed**, **myrobalan siris**, and **selu**

379 At 6.52.30 (Su 1938: 769) Ḍalhaṇa noted that *sindhu* can be interpreted as salt (*saind-hava*).

380 The vulgate text here is quite different, recommending that the patient have medicated powder blown up his nose. It may be possible to detect the evolution of the Nepalese अवसीदेत् to the vulgate's अवपीडश्. The vulgate version is hard to construe, and we see Ḍalhaṇa struggling to interpret it in his commentary on 5.2.43ab (Su 1938: 566). This sternutatory is, however, recommended in the Nepalese version at 5.5.30ab (Su 1938: 576), for the seventh shock of poisoning by a striped snake (*rājimat*). It is possible the text migrated from that location to this.

Another difference at this point is that the Nepalese version also does not support the vulgate's passage on the crow's foot (*kākapada*) therapy (**wuja-2003**). The same is the case at 5.5.24 (Su 1938: 575) and the clear description at 5.5.45 (Su 1938: 577), in neither of which is the therapy supported in the Nepalese version. This therapy seems unknown to the Nepalese transmission. The therapy may have migrated into the vulgate *Suśrutasaṃhitā* from the *Carakasamhitā* 6.23.66–67 (Ca 1941: 574).

381 At 4.10.8 (Su 1938: 449) Ḍalhaṇa glossed कोशवती as देवदाली and at 4.18.20 (Su 1938: 472) as कटुकोशातकी, vocabulary pointing to *Cucumis cylindrica*, *Cucumis act-angula* or *Luffa echinata*. See glossary under **luffa**.

382 A plant often cited in *Suśrutasaṃhitā*, but rarely in *Carakasamhitā* (**gvdb**). Ḍalhaṇa glossed it here, 5.2.45 (Su 1938: 566), as *ajamodā*, **wild celery**, but noted that others consider it to be *morāṭa*, **rajmahal hemp**. There is considerable complexity surrounding the identification of *morāṭa*/*mūrvā* and related synonyms (**gvdb**). Taking *agnika* as a short reference to *agnimantha*, often identified as **migraine tree**, might be plausible, since that is antitoxic or anti-inflammatory, but such a short reference is not known elsewhere.

383 At 5.2.45 (Su 1938: 566) Ḍalhaṇa said that this plant has leaves like the *paṭola*, **pointed gourd**, **gvdb** argued plausibly that this is a synonym for *arkapuṣpī*, **panacea twiner**, as Ḍalhaṇa also stated in 1.45.120 (Su 1938: 206), and the leaves of *Holostemma* and



plum, white siris, the two kinds of turmeric,<sup>384</sup> and the two kinds of poison berry,<sup>385</sup> hogweed, peas, the three heating spices, the two kinds of Indian sarsaparilla<sup>386</sup> and blue water-lily.

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Trichosanthes are indeed strikingly similar. The appearance of the plant, a creeper with sun-like flowers, fits the name. But there remains much controversy about the identities of these candidates (**adps**).

384 I.e., turmeric and Indian barberry.

385 I.e., poison berry and yellow-berried nightshade.

386 I.e., country sarsaparilla and black creeper.

## The invincible ghee

- 47–49 There is a famous ghee called “Invincible” (*ajeya*). It rapidly destroys all poisons but is itself unconquered. It is prepared with a mash (*kalka*) of the following plants: liquorice, crape jasmine, costus, deodar, peas, Indian madder, cardamom and cherry, cobra’s saffron, blue water-lily, sugar, embelia, sandalwood, cassia cinnamon, beautyberry, rosha grass, the two turmeric<sup>387</sup> the two Indian nightshades,<sup>388</sup> the two kinds of Indian sarsaparilla,<sup>389</sup> beggarweed, and heart-leaf sida.

## Curing the ‘slow-acting’ poison

- 50–52 Someone suffering from “slow-acting poison (*dūṣṭviṣa*)” should be well sweated, and purged both top and bottom. Then he should be made to drink the following eminent antidote which removes “slow-acting poison:”  
Take long pepper, rosha grass, spikenard, lodh tree, cardamom, natron, scented pavonia, red chalk, as well as gold, and pondweed.  
This antitoxin, taken with honey, eliminates slow-acting poison. It is called the “enemy of slow-acting poison (*dūṣṭviṣāri*),” and it is not prohibited in other situations.
- 53–54 If there are any other side-effects (*upadrava*), such as fever, a burning feeling, hiccups, constipation (*ānāha*), depletion of the semen, distension, diarrhoea, fainting, skin problems, bellyache (*jaṭhara*), madness, trembling, then one should treat each one in its own terms, using anti-toxic medicines.
- 55 For a prudent person, the slow-acting poison can be cured (*sādhya*) immediately. It is treatable (*yāpya*) if it is of a year’s standing. Other than this, it should be avoided for the person who eats unwholesome things.

<sup>387</sup> I.e., turmeric and Indian barberry.

<sup>388</sup> I.e., poison berry and yellow-berried nightshade.

<sup>389</sup> I.e., country sarsaparilla and black creeper.

# Kalpasthāna 3: Poisonous Insects and Animals

## Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.<sup>390</sup>

## Translation

- 1 And now we shall explain the rule (*kalpa*) that is the required knowledge about mobile poisons.<sup>391</sup>
- 3 The full explanation about the sixteen carriers (*adhiṣṭhāna*) of the mobile poisons, that have been mentioned by me in brief, will be stated.<sup>392</sup>
- 4 In that context, they are:<sup>393</sup>
  - gaze and breath,
  - teeth, nails, and bites
  - urine and faeces,
  - menstrual blood,
  - semen,
  - tail,
  - contact with saliva,
  - nipping with the mouth

Come back to the issue of "kalpa". Look up passages in the Koṣa.

<sup>390</sup> [HIML](#): IA, 291–292.

<sup>391</sup> In contrast to stationary, plant poisons. No reference is made to Dhanvantari ([birc-2021](#)).

<sup>392</sup> "Carrier" for base, foundation (*adhiṣṭhāna*) aims to capture the idea that the author will describe the creatures in which poisons inhere.

<sup>393</sup> The content of this section is presented as a table, for clarity for the contemporary reader and mindful of the theoretical issues surrounding notational variation, including the "symbolic rewriting" and the modification of "expressive capacities" discussed by [saru-2016](#). For further discussion, see [wuja-2021](#).

<sup>394</sup> This interpretation comes from Ḍaḥaṇa on 5.3.4 ([Su 1938](#): 567), but he reads विशर्धित.

- (*mukhasaṃdaṃśā*),
- fart (*avaśardhita*),<sup>394</sup>
- anus,<sup>395</sup>
- bones,
- bile,
- bristles (*śūka*), and
- corpses.

5 In that context,

<i>location of the poison</i>	<i>creatures</i> <sup>396</sup>
in their breath and gaze	divine snakes
in their fangs	the ones on earth <sup>397</sup>
in their nails, mouths and fangs	cats, dogs, monkeys, men ( <i>nara</i> ), <sup>398</sup> crocodiles, frogs, ‘cook-fish’ ( <i>pākamatsya</i> ), <sup>399</sup> monitor lizards, cone snails ( <i>śambūka</i> ), ‘poisonous snakes’ ( <i>pracalāka</i> ), <sup>400</sup> geckos ( <i>grhagoḍikā</i> ), <sup>401</sup> four-footed insects and others
in their urine and faeces	lice ( <i>kiṭīpa</i> ), ‘flat insects’ ( <i>picciṭā</i> ), ‘orange-dwellers’ ( <i>kaṣāyavāsika</i> ), ‘pepper snakes’ ( <i>sarṣapaka</i> ), ‘angry beetles’ ( <i>toṭaka</i> ), dung beetles ( <i>varcaḥkīṭa</i> ), and ‘pot insects’ ( <i>kaunḍinya</i> )
in their semen	mice

395 Ḍalhaṇa on 5.3.4 (Su 1938: 567) noted this reading.

396 Many of these names are mere dubious placeholders.

397 Ḍalhaṇa on 5.3.5 (Su 1938: 567) cited the otherwise unknown authority Sāvitra on the topic of poisonous snakes (HIML: ???, ???).

398 Probably dittography from the previous word, monkey (*vānara*). But it is supported in both Nepalese witnesses, so it must go back to an earlier exemplar.

399 MS KL 699 separates the words पाक and मत्स्य with a daṇḍa, indicating that the scribe thought they were separate terms. Ḍalhaṇa thought this was a kind of fiery insect (5.3.5 (Su 1938: 567)).

400 *Arthaśāstra* 14.1.14, 23 (Olivelle 2013: 448), where it might also be a chameleon, but the latter are not venomous.

401 The scribe of MS NAK 5-333 noted in the margin that some of his sources read गल-गोडिका, which is the name of a snake known also in the *Carakasamhitā* and elsewhere in literature. Hemacandra’s *Abhidhānacintāmaṇi* (4.364) mentions that गृहगोडिका and गृहगोलिका are synonyms (radh-1876).

<i>location of the poison</i>	<i>creatures</i>
in their stings ( <i>śūla</i> )	scorpions, 'earth scorpions' ( <i>viśvambhara</i> ), wasps ( <i>varaki</i> ), <sup>402</sup> fish, crabs ( <i>uccīṭiṅga</i> ), and 'wing-scorpions' ( <i>patravṛścika</i> )
in their saliva, nails, urine, feces, blood, semen and fangs	spiders
in the bites of their mouths	flies, wasps ( <i>kaṇabha</i> ) and leeches
in the bites of their mouths, in their fangs, faces, †, farts, anuses and feces	'speckle-heads' ( <i>citraśīrṣa</i> ), 'lids' ( <i>śārava</i> ), 'bellied' ( <i>kukṣita</i> ), 'wood-enemies' ( <i>dārukāri</i> ), 'liquors' ( <i>medaka</i> ), and 'darts' ( <i>śārikā</i> ).

Table 2: Passage 5, expressed in tabular format.

- 6 The enemies of the king pollute the waters, roads and foodstuffs in enemy territory. The experienced physician, who has learned how to purify things, should clean up those polluted things.
- 7 Polluted water is slimy and smells of tears.<sup>403</sup> It is covered with froth and covered with streaks. The frogs and fish die, the birds are crazed and, along with the wetland creatures, they wander about aimlessly.
- 8 Men, horses and elephants who swim in it experience vomiting, delusion, fever, swelling and sharp pains.<sup>404</sup> He should try to purify that

402 वरटी is a wasp; वरकि in the Nepalese MSS may be an alternant of this word. Ḍalhaṇa on 5.3.5 (Su 1938: 568) remarked that some interpreted वरकिमत्स्य as two items, "wasp and fish," others as a single one, "wasp-fish."

403 अस normally means "tears," but rarely means "blood."

404 On the polysemy of elephant/snake (*nāga*), see seme-1979.

- polluted water, after curing their ailments.
- 9 And so, he should burn **axlewood** and **garjan oil tree**, as well as **corky coral tree**, with **crimson trumpet-flower tree** and **small-flowered crape myrtle** and **weaver's beam tree**, and with **golden shower tree** and **white catch tree**. Then he should sprinkle that ash, cold, on the waters.
- 10–11 And in the same way, putting a handful of the ash in a pot, one may also purify water that one wants.  
If any one of the limbs of cows, horses, elephants, men or women, touch a place on the ground that enemies have spoiled with poison, or a ford or rock or a flat surface, then it swells up and burns and its hair and nails fall out on that place.<sup>405</sup>
- 12 In that situation, he should grind up **country sarsaparilla** together with all the aromatic items, with alcoholic drinks. And then he should sprinkle the paths that need to be used with waters mixed with mud.<sup>406</sup> And if there exists another path, he should go by that.<sup>407</sup>
- 13 When grasses and foods are polluted, people collapse, fall unconscious. And others vomit. They get loose stool (*viḍbheda*) or they die. One should apply to them the therapy as described.
- 14–15 Alternatively, one should wipe various musical instruments with antidotes that remove poison and then play them. What is called the most excellent paste for a musical instrument is **certain minerals**<sup>408</sup> together with **gold and sarsaparilla**, and a portion of of **nutgrass** equal to that,

405 “Swells up” translates an unclear reading that was probably शूयति, which may be an irregular form of √शू, श्वा, श्वि (**whit-root**).

406 Our “alcoholic drinks” translates सुरा. For a discussion of this term at our period see **mchu-2021a**.

407 Ḍalhaṇa on 5.3.12 (**Su 1938**: 568) cited a similar reading for the fourth pāda, but with a negative particle, “and if there is no other way, one should go by that.”

408 “Certain minerals” translates तारावितार, the unanimous reading of the Nepalese witnesses. But the meaning of this expression is not clear and may even refer to plants, like the other ingredients. The vulgate reads तारः सुतारः, which is also not very clear. However, Ḍalhaṇa on 5.3.14 (**Su 1938**: 568) identified these as “silver” and “mercury.” This is highly unlikely to be a correct understanding of the passage. Historically, mercury is not naturally present in the South Asian peninsula (**watt-1896**) and the word पारद that Ḍalhaṇa used is probably a loan-word from Persian (**stei-pers**). Mercurial compounds are not reliably attested in South Asia until two or three centuries after the composition of the *Suśrutasaṃhitā* at the earliest. The currently available “sāstric” recension of the *Arthaśāstra* that is datable to 175–300 CE (Olivelle **2013**: 29–31) does not mention mercury (*ibid*, 534). See further the study by **wuja-2013b**.

- together with the bile called “brown cow”.<sup>409</sup> By the sound of the musical instrument, even terrible poisons that may be present at that place are destroyed.
- 16 If there is smoke or wind that is affected by poison then birds are dazed and fall to the ground. People get coughs, colds, and head illnesses, and acute eye diseases.<sup>410</sup>
- 17 The smoke and air can be purified by putting into the air: lac, turmeric, Himalayan monkshood, and myrobalan, with Himalayan mayapple, costus, cardamom,<sup>411</sup> and peas, and beautyberry.

write footnote: don't repeat  
ativisā; vulgate similar to H.

### The origin of poison

- 18 As it is told, the arrogant demon called Kaiṭabha created an obstacle for lotus-born Brahmā, at the very time that he was creating these creatures.<sup>412</sup>
- 19 Pitiless Fury took a body and burst out of the mouth of furious Brahmā's store of fiery energy.<sup>413</sup>
- 20 He burned that great, thundering, apocalyptic demon. Then, after bringing about the annihilation of that demon, his amazing fiery energy increased.
- 21 And so, there was a sinking down (*viṣāda*) of the Daityas. Observing that, it was named “poison (*viṣa*)” because of its ability to produce a “sinking down.”
- 22 After that, the Lord created beings and subsequently made that fury enter into creatures still and moving.
- 23–24 Water that falls from the sky to the earth has no obvious flavour. The savour of the different places it lands on enters into it. In the same way,

409 सुरेन्द्रगोप and कुरुविन्द are both uncertain, see index. Ḍalhaṇa's opinion has been followed here, but it seems fair to say that all commentators were guessing.

410 The syntax of this verse is somewhat loose; the vulgate has regularized it, smoothing out the difficulties.

411

412 At this point, the text seems to make a new beginning to the topic of toxicology, as if starting a new chapter. It is notable that no reference is made here to the famous origin story of poison in the churning of the primal milk ocean; for discussion of the sources of this account, see **bede-1967**. For reflections on this passage, connecting it with Rudra and the *Śatapathabrāhmaṇa*, see **mana-2019**.

413 “Fury” is here anthropomorphised.

- whatever substance a poison reaches, it establishes itself there and by its nature it takes on that substance's savour.<sup>414</sup>
- 25 Generally speaking, in a poison, all the qualities are really sharp. For this reason, every poison is known to irritate all of the humours.
- 26 Irritated and afflicted by the poison, they leave their natural functions. Poison does not get digested, so it blocks the breaths.<sup>415</sup>
- 27 Breathing is obstructed because its pathway is blocked by phlegm. Even if life continues, a man remains without consciousness.
- 28 Similar to semen, the poison of all angry snakes pervades the whole body, and goes to the limbs like semen because of being stirred up.
- 29 The fang of snakes is like a hook. When it gets there, it sticks inside them. That is why the unagitated poison of a snake is not released.
- 30 Sprinkling with very cold water is traditional for all cases of poisoning, because poison is declared to be extremely hot and sharp.<sup>416</sup>
- 31 Poison in insects is slow and not very hot, having a lot of wind and phlegm. So in cases of insect poisoning, sweating is not forbidden.
- 32cd In cases of a strike or a bite, the poison may, of its own accord, stay there.
- 33–35ab †Having come upon a body,<sup>417</sup> in the case of corpses that that have been pierced by a poisoned arrow and bitten by a snake, someone who eats the poisoned flesh of a recent corpse out of carelessness will suffer with illness according to the poison, or even die. And therefore, the flesh of those should not be eaten when they have just died.
- It is admissible after three quarters of an hour, but without the poisoned arrow and the snakebite.
- 35.1 [At this point an Upajāti verse is added in the margin of K but is not fully legible; the version of the text in H is also incomplete and not fully comprehensible.]<sup>418</sup>

414 The scribal emendation in MS Kathmandu NAK 5-333 of नियच्छति to निगच्छति suggests that the scribe had more than one manuscript before him, one of them representing the reading of the vulgate recension.

415 Probably a reference to the five breaths. Ḍalhaṇa referred to winds (वात), but this does not seem correct since it is a reference to humours rather than breaths.

416 The verb पठ् "is declared, read aloud" here could possibly suggest that the author is working within a written, not oral, tradition.

417 "Having come upon" translates प्रस्थाप्य, which is hard to interpret unless it is a rare form connected with the sense "to see."

418 *Mādhavanidāna*, 69.20–21 (**madhava1**) has verses that are directly parallel to this section:

*darvīkarāṇām viṣam āśughāti sarvāṇi coṣṇe dviguṇībhavanti ajīrṇapittātapapīḍiteṣu bāleṣu*



- 35.3 †When, in a wound, the poison that is connected with these qualities runs, ...Therefore, not everything that is damaged by poison and eaten causes death.  
419
- 35.1 [śloka in the MSS that aren't in the vulgate. The first line doesn't scan. Witness K adds a part of the start of this in the bottom margin. This material is repeated at 3.39.2 in MS H. ]
- 35cd & 36cd One designates a person who has diarrhoea of feces looking like soot (*grhadhūma*) with wind,<sup>420</sup> and who vomits foam, as “someone who has drunk poison.”
- 37 Therefore, fire burns a heart that is pervaded by poison. For, having pervaded of its own accord the location of consciousness, it abides.<sup>421</sup>

## Patients beyond help

- 38 Patients who should not be accepted include: those who have been bitten under a [peepul tree](#), in a temple, in a cemetery, at an ant-hill, at dawn or dusk, at a crossroads, under Yama's asterism,<sup>422</sup> under the Great Bear and people who have been bitten in lethal spots.
- 39 The poison of cobras kills rapidly. They all gain twice the intensity in those who have indigestion, those who are afflicted by bile or wind, old people, children and the hungry.
- 39.1 In those whose who are mad or intoxicated, or who suffer from anxiety, or who are unable to tolerate its various strengths, it becomes sharp. †...

*vr̥ddheṣu bubhukṣiteṣu 20*

*kṣīṇakṣate mohini kuṣṭhayukte rūkṣe 'bale garbhavatīṣu cāpi*

*śāstrakṣate yasya na raktam eti rājyo latābhiś ca na saṁbhavanti 21.* This passage is the only occurrence in the ayurvedic text corpus that relates to the Nepalese version of the *Suśrutasaṁhitā* at this point. This suggests that Mādhavakara (fl. ca. 700, Bengal) knew and used the Nepalese version.

419 At this point, witness H inserts a marginal *Indravajrā* verse about diseases that afflict immoral women.

420 गृहधूम is not a plant in this context *pace moni-sans*. See the discussion in note 326, p. 118.

421 Ḍalhaṇa said that someone who has died from drinking poison has a heart that cannot be burned because it is pervaded by poison (5.3.37 (*Su 1938*: 570)). But the sense of the Nepalese MSS is the opposite.

422 याम्ये means “southerly” but Ḍalhaṇa on 5.3.38 (*Su 1938*: 570) interpreted it as “in Yama's direction” as “under the seventh asterism.”

material  
corres-  
ponds to  
SS.1.45.205ab,  
where it  
describes  
how alcohol  
affects the  
body.

- 39.2  
3.40cd–3.41 One should reject someone overcome by poison who does not bleed when cut with a knife, where weals do not appear as a result of lashes,<sup>423</sup> or where there is no horripilation because of cold water, whose mouth is crooked, whose hair is falling out of his head. A man who is fatigued and those who stammer,<sup>424</sup>
- 3.42 one who has a black and red swelling at the site of the bite, with lockjaw, should be avoided. The same goes for someone who has a solid plug emerge from their mouth and someone who has blood running from above and below and
- 3.43ab The physician should also avoid a person who has fangs that have not fallen out quickly.<sup>425</sup>

423 Dalhaṇa, on 5.3.40 (*Su* 1938: 570), glossed लताभिस् “by means of whips,” as “when the body is struck by whips.”

424 nāsāvasāda & plural sakaṇṭhabhaṅgāḥ

425 The grammatical verb-form परिवर्जयित “he should avoid,” opt., 3rd, sg., is unusual. **reno-1940** documented such forms from the *Aitareyabrāhmaṇa* onwards. **ober-2003** showed that the form is well-documented in *manuscripts* of the *Mahābhārata*, but has been edited out of the printed critical edition in almost all cases. Cf. also **kuli-2006**. The concern about a patient who “has fangs that have not fallen out” is hard to understand. The word दंष्ट्रा does not mean human teeth (दन्त). We therefore prefer to interpret this as a patient where the fangs of a venomous creature remain in the bite-wound. This requires construing the expression as a *bahuvrīhi* compound: दंष्ट्रा or दंष्ट्र + अनिपातः.

# Kalpasthāna 4: Snakes and Invenomation

## Introduction

The fourth chapter of the Kalpasthāna of the *Suśrutasaṃhitā* addresses the topic of snake bites and snake venom. Unusually for the Nepalese version of the *Suśrutasaṃhitā*, the discussion is framed as a question from Suśruta to the wise Dhanvantari. Suśruta's questions are about the number of snakes, how they are classified, the symptoms of their bites and the pulses or stages of toxic shock experienced by a victim of snakebite and related topics. The taxonomy of snakes is presented in tabular form in Figures 1 and 2.<sup>426</sup>

## Literature

A brief survey of this chapter's contents and a detailed assessment of the existing research on it to 2002 was provided by Meulenbeld.<sup>427</sup> There also exists an substantial herpetological literature from colonial India as well as more recent studies of snakes in the context of cultural and religious life.

The ophiological literature of the colonial period began in the late nineteenth century with the work of Fayrer, whose publication included striking colour paintings of snakes.<sup>428</sup> **fayr-1874** provided a biological

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<sup>426</sup> On the idea of notational variants in scientific translation, see **elsh-2008saru-2016wuja-2021**.

<sup>427</sup> **HIML**: IA, 292–294. In addition to the translations mentioned by Meulenbeld (**HIML**: IB, 314–315), a translation of this chapter was included in P. V. Sharma **1999–2001**: 3, 35–45. The classic work of **joll-1951** offered a short but accurate overview of Indian toxicology.

<sup>428</sup> **fayr-1874**, first published in 1872.

taxonomy of snakes as well as chapters on mortality statistics during the nineteenth century, treatment and effects of poison, and experimental data. **ewar-1878** included descriptions of appearance and behaviour of poisonous snakes and sometimes their local names and reproducing Fayrer's illustrations.<sup>429</sup> **wall-1913** provided a useful analysis of the medical effects of snake envenomation in India arranged by the varied symptomology of different snakes. He also discussed the difference between the symptoms of toxicity and fright (69–75) and also the difficulties arising out of uncertainty about the effects of snake-bite (124–126). The *Suśrutasamhitā* too recognized the emotional and somatic effects of fright (see note 445 below). **wall-1921** provided a wealth of detail of the snakes of Sri Lanka, including line drawings.

**doni-2015** provided a good survey of snakes as protagonists in religious literature from the *Atharvaveda* through the epics, *Purāṇas* and Buddhist literature. **seme-1979** traced semiotics of the term *nāga* through Vedic, Pali and Sanskrit literature. **slou-2016** discussed the *Suśrutasamhitā*'s *Kalpasthāna* as a precursor and influence on later Tantric traditions of snake-bite interpretation and therapy. In particular, the Tantric *Kriyākālaguṇottara* text that Slouber presented divided snakes into two basic categories, divine and mundane, as the *Suśrutasamhitā* does.<sup>430</sup> But unlike the *Suśrutasamhitā*, in the *Kriyākālaguṇottara* the chief taxonomic principle for both groups is the four *varṇas*.

A discussion of this chapter specifically in the light of the Nepalese manuscripts was published by Harimoto.<sup>431</sup> After a close comparative reading of lists of poisonous snakes, Harimoto concluded that, "the Nepalese version is internally consistent while the [vulgate] editions are not." Harimoto showed how the vulgate editions had been adjusted textually to smooth over inconsistencies, and gave insights into these editorial processes.<sup>432</sup>

429 Calling his work a supplement to **fayr-1874**, but also being cited by Fayrer, **ewar-1878** evidently also collected local indigenous knowledge from his "snake-man" (p. 22).

430 **slou-2016**.

431 **hari-2011**.

432 The two editions that Harimoto noted, **Su 1938** and **bhat-1889**, present identical texts.

## The Seven Stages of Toxic Shock

A prominent feature the *Suśrutasamhitā*'s interpretation of envenomation symptoms is the concept of seven successive stages or pulses (*vega*) of toxic shock after a bite. This is interestingly coordinated with the *Suśrutasamhitā*'s concept of the *kalās*, which are either seven layers of skin that come into existence during embryonic development or seven interstitial tissues that separate the various parts of the body.<sup>433</sup>

Contemporary clinical studies of snake envenomation and treatment do not show any awareness of such a seven-stage symptomology of traditional Indian medicine.<sup>434</sup> Exceptionally, the studies by **barc-2008** and **oezb-2021**, do identify and tabulate three stages of envenomation.<sup>435</sup> The symptoms of these three stages are mainly characterized by increasing degrees of edema. This differs from the *Suśrutasamhitā*'s detailed characterization of changes in skin colour etc.<sup>436</sup>

## Translation

- 1 Now we shall explain the procedure (*kalpa*) that is what should be known concerning the venom in those who have been bitten by snakes.<sup>437</sup>
- 3 Suśruta, grasping his feet, questions the wise Dhanvantari, the expert in all the sciences.

<sup>433</sup> The system of the कला is described at 4.4.4–20 (**Su 1938**: 355–357). Cf. **josi-maha, gupt-1983, kutu-1962, HIML**: 1, 247–248 and notes. This system of dermal and interstitial कला was not known to the *Carakasamhitā* as such; rather, the *Carakasamhitā* mentioned six kinds of skin (त्वच) (4.7.4 (**Ca 1941**: 337)), with different names and characteristics, a contradiction discussed by the commentator Cakrapāṇidatta (*idem*). It appears in later works such as the fourteenth-century *Śārṅgadharasamhitā* (1.1.60 (**sast-1931**)).

<sup>434</sup> E.g., **elle-1997wein-2009pill-2013who-2019meht-2002hamz-2021desh-2022**.

<sup>435</sup> **barc-2008**, and **oezb-2021**, broadly following **barc-2008**.

<sup>436</sup> I am grateful to Prof. Jan Gerris (U. Ghent) and Prof. Jan Tytgat (KU Leuven) for assistance in finding relevant toxicological literature.

<sup>437</sup> The *Sarvāṅgasundarī*, commenting on *Aṣṭāṅgahṛdayasamhitā* 1.16.17 (**Ah 1939**: 246), glossed कल्प as प्रयोग.

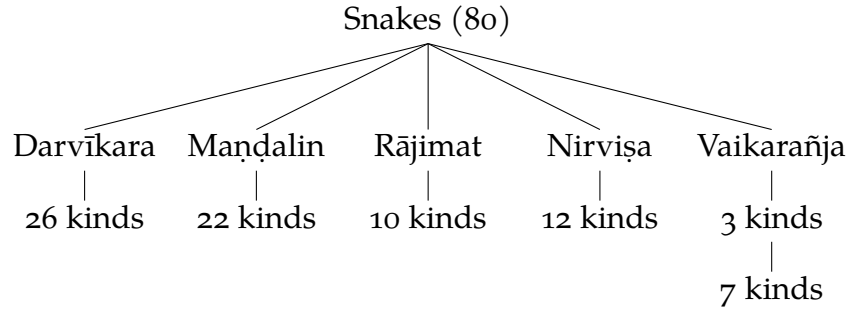


Figure 1: The taxonomy of snakes in the vulgate, 5.4.9–13ab (Su 1938: 571).

- 4 “My Lord, please speak about the number of snakes, and their divisions, the symptoms of someone who has been bitten, and the knowledge about the toxic reactions of poisoning”.<sup>438</sup>

### [The Taxonomy of Snakes]

- 5 On hearing his query, that distinguished physician spoke.  
 “The venerable snakes such as Vāsukī and Takṣaka are uncountable.  
 6–9ab “They are snake-lords who support the earth, as bright as the ritual fire, ceaselessly roaring, raining and scorching. They hold up the earth, with its oceans, mountains and continents. If they are angered, they can destroy the whole world with a breath and a look. Honour to them. They have no role here in medicine.  
 “The ones that I shall enumerate in due order are those mundane ones with poison in their fangs who bite humans.”<sup>439</sup>
- 9cd–10 “There are eighty kinds of snakes and they are divided in five ways: Darvīkaras, Maṇḍalins, Rājīmats, and Nirviṣas. And Vaikarañjas that are traditionally of three kinds.”<sup>440</sup>

<sup>438</sup> The expression “toxic reactions” translates वेग, which in other contexts may mean “(natural) urge.” Here, it is rather the discrete stages or phases of physiological reaction to envenomation. Cf. the symptoms of cobra poisoning described by wall-1913.

<sup>439</sup> The next few verses are discussed in detail by hari-2011, who shows that in the taxonomy of snakes, the Nepalese version of the *Suśrutasamhitā* has greater internal coherence than the vulgate recension.

<sup>440</sup> hari-2011 translated these names as “hooded,” “spotted,” “striped,” “harmless,” and

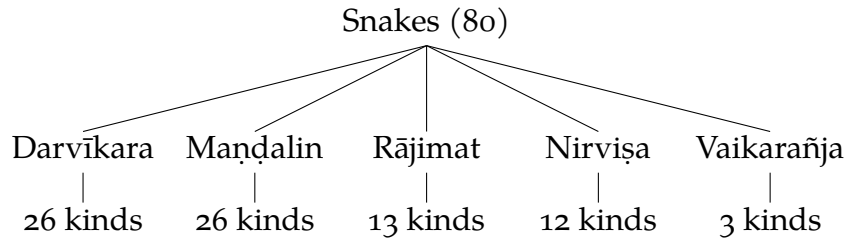


Figure 2: The taxonomy of snakes in the Nepalese version.

- 11 “Of those, there are twenty and six hooded snakes, and the same number of Maṇḍalins are known. There are thirteen Rājimats.<sup>441</sup>
- 12 “There are said to be twelve Nirviṣas and, according to tradition, three Vaikarañjas.

### [Behaviours]

- 13–14ef “If they are trodden on, ill-natured or provoked or even just looking for food, those very angry snakes will bite. And that is said to happen in three ways: serpented (*sarpita*), torn (*darita*) and thirdly without venom (*nirviṣa*). Some experts on this want to add “hurt by the snake’s body”.<sup>442</sup>
- 15–16 “The physician can recognize the following as “ophidian (*sarpita*)”: Where a rearing snake makes one, two or more puncture-marks of its teeth, when they are deep and without much blood,<sup>443</sup> accompanied

Or “There are 20 phanins and 6 maṇḍalins. The same number are known. There are 13 Rājimats.” Or even, “there are 20 Phanins and six of them are Maṇḍalins.” Are phanins really the same as darvikaras?

“hybrid.” Figure 1 shows the taxonomy described in the vulgate text; Figure 2 shows the different and more logical division of the Nepalese version of the *Suśrutasamhitā*.

441 The phrasing of this śloka is awkward.

442 This might refer to constriction. The phrase reads like a commentarial addition rather than the main text of the *Suśrutasamhitā*.

443 The word उद्धृत “aroused” was glossed by Ḍalhaṇa at 5.4.15 (Su 1938: 571) as उन्मोदय, a word not found as such in standard dictionaries (**moni-sans; apte-prac; mayr-kurz; josi-maha**). Semantic considerations suggest that the word is not related to √mut “break” or mūta/mūṭa “woven basket.” Perhaps it is related to the Tamil மொட்ட (*mōṭṭi*), whose meanings include “arrogance, grandeur, display” (burr-1984) or to faintly-documented forms like moṭyate “is twisted” (CDIAL). Ḍalhaṇa’s उन्मोदय may thus mean “twisting up” or “making an arrogant display.”

Note that पद “puncture-mark” (more literally, “footprint”) is being used in the same sense as in 1.13.19 (Su 1938: 57) when describing the marks on the body where a knife scarifies the skin before leeching. See footnote 49.

by a little ring of spots (*cuñcumālaka*),<sup>444</sup> lead to degeneration, and are close together and swollen.

- 17 Where there are streaks with blood, whether it be blue or white, the physican should recognize that to be “torn (*darita*),” having a small amount of venom.
- 18 The physician can recognize the locations of the bites of a person in a normal state as being free from poison, when the location is not swollen, and there is little corrupted blood.
- 19 The wind of a timid person who has been touched by a snake can get irritated by fear. It causes swelling.<sup>445</sup> That is “hurt by a snake’s body.”
- 20 Locations bitten by sick or frightened snakes are known to have little poison. Similarly, a site bitten by very young or old snakes has little poison.
- 21 Poison does not progress in a place frequented by eagles,<sup>446</sup> gods, holy sages, spirits, and saints, or in places full of herbs that destroy poison.<sup>447</sup>

### [Characteristic Features of Snakes]

- 22 Darvīkara snakes are know to have hoods, to move rapidly, and to have rings, ploughs, umbrellas, crosses, and hooks on them.

444 The usual dictionary lexeme is चञ्चु, not चुञ्चु as in the Nepalese witnesses. We translate “spots” following Ḍalhaṇa and Gayadāsa on 5.4.15 (Su 1938: 571), where they described a group of spots or swellings at the site of the bite. On the history of the word मालक, see kief-1996.

445 wall-1913 remarked on the difficulty of separating toxicity symptoms from the psychosomatic effects of terror:

The gravity of symptoms due to fright does not appear to me to be sufficiently recognised, though there is no doubt in my mind that fatal cases from this cause are abundant, especially among the timid natives of this country.

Wall went on to give several case studies in which patients experienced syncope or even died as a result of bites from toxicologically harmless creatures.

446 Ḍalhaṇa on 5.4.21 (Su 1938: 571) identified the सुपर्ण as a गरुड. On the bird called सुपर्ण, dave too noted that it may be a synonym for Garuḍa, and in some contexts may refer to the Golden Eagle, Golden Oriole, Lammergeyer, etc. dave noted again that the Garuḍa is a mythical bird but may refer to the Himalayan Golden Eagle and other species of eagle. He pointed out that historically,

The original physical basis for गरुड as the नागाशी (snake-eater) was most probably the Sea-Eagle who picks up sea-snakes from the sea or sand-beach and devours them on a nearby tree... (dave).

Dave continued with interesting reference to Śrīharṣa’s *Nāgānanda*.

447 For “spirits” the Nepalese version has भूत while the vulgate reads यक्ष.



- 23 Maṇḍalin snakes are known for being large and slow-moving. They are decorated with many kinds of circles. They are like a flaming fire because of their poisons.
- 24 Rājimat snakes are smooth and traditionally said to be, as it were, mottled with multicoloured streaks across and above.

### [Classes of Snake]

- 25 Snakes that are shine like pearls and silver, and that are amber and that shine like gold, and smell sweet are traditionally thought of as being of the Brāhmaṇa caste.
- 26 Warrior snakes, however, are those that look glossy and get very angry. They have the mark of the sun, the moon, the earth, an umbrella and bitumen.
- 27 Merchant snakes may traditionally be black, shine like diamond or have a red colour or be grey like pigeons.
- 28 Any snakes that are coloured like a buffalo and a tiger, with rough skin and different colours are known as servants.<sup>448</sup>
- 31 All snakes that are variegated (Rājīmats) move about during the first watch of the night. The rest, on the other hand, the Maṇḍalins and the Darvīkaras, are diurnal.<sup>449</sup>
- 29 Wind is irritated by all hooded snakes; bile by Maṇḍalins and phlegm by those with many stripes.
- 30 Because of the two classes having greater, lesser or equal class, there is the characteristic of irritating two humours.  
And he will explain the opposing view that is to be known as a result of the non-union of a male and female.<sup>450</sup>

### [Enumeration of Snakes]

- 34.1 In that context, here are the Darvīkaras.

<sup>448</sup> Presumably “different” from the earlier-mentioned castes.

The sequence of the following three verses is slightly different from the vulgate (5.4.29–31 (Su 1938: 572)).

<sup>449</sup> The readings of the vulgate, that Rājīmats are active in the early night, the Maṇḍalins in the later night, and Darvīkaras in the day, seem clearer.

<sup>450</sup> The sense of the last phrase here is quite different from the vulgate, which says only that “details” will be explained below.

- |  |   |
|--|---|
| 1. The Black snake ( <i>kṛṣṇasarpa</i> );              | ( <i>mahāpadma</i> );                     |
| 2. The Big Black ( <i>mahākṛṣṇa</i> );                 | 16. The Grass Flower ( <i>apuṣpa</i> );   |
| 3. The Black Belly ( <i>kṛṣṇodara</i> );               | 17. The Curd Mouth                        |
| 4. The All Black ( <i>sarvakṛṣṇa</i> ); <sup>451</sup> | ( <i>dadhimukha</i> );                    |
| 5. The White Pigeon                                    | 18. The Lotus Mouth                       |
| ( <i>śvetakapota</i> ); <sup>452</sup>                 | ( <i>puṇḍarīkamukha</i> );                |
| 6. The Rain Cloud ( <i>valāhako</i> );                 | 19. The Brown Hut Mouth                   |
| 7. The Great Snake                                     | ( <i>babhrūkuṭīmukha</i> );               |
| ( <i>mahāsarpa</i> );                                  | 20. The Variegated ( <i>vicitra</i> );    |
| 8. The Conch Keeper                                    | 21. The Flower Sprinkle Beauty            |
| ( <i>śaṃkhapāla</i> );                                 | ( <i>puṣpābhikīrṇnābha</i> );             |
| 9. The Red Eye ( <i>lohitākṣa</i> );                   | 22. The Mountain Snake                    |
| 10. The Gavedhuka ( <i>gavedhuka</i> );                | ( <i>girisarpa</i> );                     |
| 11. The Snake Around                                   | 23. The Straight Snake                    |
| ( <i>parisarpa</i> );                                  | ( <i>ṛjusarpa</i> );                      |
| 12. The Break Hood                                     | 24. The White Rip ( <i>śvetadara</i> );   |
| ( <i>khaṇḍaphaṇa</i> );                                | 25. The Big Head ( <i>mahāśīrṣa</i> );    |
| 13. The Kūkuṭa ( <i>kūkuṭa</i> );                      | and                                       |
| 14. The Lotus ( <i>padma</i> );                        | 26. The Hungry Sting ( <i>alagarda</i> ); |
| 15. The Great Lotus                                    |   |

#### 34.2 Here are the Maṇḍalins

- |  |  |
|--|--|
| 1. The Mirror Ring                       | 10. The Bamboo Leaf                      |
| ( <i>ādarśamaṇḍala</i> );                | ( <i>veṇupatraka</i> );                  |
| 2. The White Ring                        | 11. The Kid ( <i>śīśuka</i> );           |
| ( <i>śvetamaṇḍala</i> );                 | 12. The Intoxicator ( <i>madanaka</i> ); |
| 3. The Red Ring ( <i>raktamaṇḍala</i> ); | 13. The Morning Glory                    |
| 4. The Speckled ( <i>prṣata</i> );       | ( <i>pālindaka</i> );                    |
| 5. The Gift of God ( <i>devadinna</i> ); | 14. The Stretch ( <i>tantuka</i> );      |
| 6. The Pilindaka ( <i>pilindaka</i> );   | 15. The Pale as a Flower                 |
| 7. The Big Cow Snout                     | ( <i>puṣpapāṇḍu</i> );                   |
| ( <i>vṛddhagonasa</i> );                 | 16. The Six Part ( <i>ṣaḍaṅga</i> );     |
| 8. The Jackfruit ( <i>panasaka</i> );    | 17. The Flame ( <i>agnika</i> );         |
| 9. The Big Jackfruit                     | 18. The Brown ( <i>babhru</i> );         |
| ( <i>mahāpanasaka</i> );                 | 19. The Ochre ( <i>kaṣāya</i> );         |

<sup>451</sup> Not in vulgate.

<sup>452</sup> The vulgate adds The Big Pigeon (*mahākapota*).

20. The Khaluṣa (*khaluṣa*);  
 21. The Pigeon (*pārāvata*);  
 22. The Hand Decoration (*hastābharaṇaka*);
23. The Tatra (*tatra*);<sup>453</sup>  
 24. The Mark (*citraka*);  
 25. The Deer Foot (*eṇīpada*).<sup>454</sup>
- 34.3 Here are the Rājīmat.<sup>455</sup>
1. The Lotus (*puṇḍarīka*);  
 2. The Stripe Speckle (*rājicitra*);  
 3. The Finger Stripe (*aṅgulirāji*);  
 4. The Two Finger Stripe (*dvyāṅgulirāji*);  
 5. The Drop Stripe (*bindurāji*);  
 6. The Mud (*kardama*);
7. The Grass Drier (*trṇaśoṣaka*);  
 8. The White Jaw (*svetahanu*);  
 9. The Grass Flower (*darbhapuṣpa*);<sup>456</sup>  
 10. The Red Eye (*lohitākṣa*);<sup>457</sup>  
 11. The Ringed (*cakraka*);  
 12. The Worm Eater (*kikkisāda*);
- 34.4 Here are the Nirviṣas.
1. The Rain Cloud (*valāhako*);<sup>458</sup>  
 2. The Snake Flag (*ahipatāka*);  
 3. The White Leaf (*śukapatra*);  
 4. The Goat Swallower (*ajagara*);  
 5. The Stimulator (*dīpyaka*);  
 6. The Ilikinī (*ilikinī*);  
 7. The Year-Snake (*varṣāhika*);
8. The Two-day (*dvyāhika*);  
 9. The Milk Flower (*kṣīrikāpuṣpa*);  
 10. The Flower All (*puṣpasakalī*);  
 11. The Chariot of Light (*jyotīratha*);  
 12. The Little Tree (*vṛkṣaka*);

## [Breeding and Gender]

- 34.5 The Vaikaraṇjas originate out of contrary unions amongst the three colours.<sup>459</sup> Thus:

<sup>453</sup> This seems implausible, but otherwise the list of Maṇḍalins would be short.

<sup>454</sup> The list is short by one item. Perhaps the one of the snakes named in the vulgate, *citramaṇḍala*, *gonasa* or *piṅgala*, should be considered here.

<sup>455</sup> The following list is one item short. The vulgate text, however, has several names that do not appear in the Nepalese Rājīmat list, for example Sarṣapaka and Godhūmaka.

<sup>456</sup> Also in the Darvīkara list.

<sup>457</sup> Also in the Darvīkara list.

<sup>458</sup> Also in the Darvīkara list.

<sup>459</sup> The word *varṇa* in this chapter normally means “colour” not “class.” (“Class is expressed by “jāti.”) While *kṣṇasarpa* is clearly a colour-type, it is less obvious that *gonasī* is a special colour, and *rājīmat* is a group of snakes.

varṇa  
means “col-  
our” else-  
where?

1. The Mākuli (*mākuli*);
2. The Poṭa Throat (*poṭagala*);
3. The Oil Stripe (*snigdharāji*);

Amongst those, the Mākuli (*mākuli*); is born when a male Black Snake mates with a female Cow Snout (*gonasa*), or the reverse. The Poṭa Throat (*poṭagala*) is born when a male Rājila mates with a female Cow Snout (*gonasa*) or the reverse. The Oily Stripe (*snigdharāji*) is born when a male Black Snake mates with a female Rājimat, or the reverse. Their poison is like that of their father, because it is the superior one out of the two; but others say it is like the mother. Thus eighty of these snakes have been described.

- 35 Amongst them, males have large eyes, tongues and heads.<sup>460</sup> Females have small eyes, tongues and heads. Neuters have both characteristics, and are slow to exert themselves or be angry.<sup>461</sup>
- 36 In that context we shall give instruction in a general way about the sign of having been bitten by any of the snakes.

For what reason?

Because poison acts quickly, like a fire with an oblation, a honed sword, or a thunderbolt.<sup>462</sup> And ignored for even a period of time, it can drag the patient away. There is not even an opportunity to follow the literature.<sup>463</sup>

And when the symptom of being bitten is stated, there will be three ways of treating it because there are three kinds of snake. Therefore we shall explain it in three ways. “For this is good for people who are ill, and it removes confusion and in this very case it prevents all symptoms”.<sup>464</sup>

460 The vulgate includes the snake’s mouth in this and the next list.

461 The reading मन्दचेष्टाक्रोधा is an awkward compound; possibly the original reading was मन्दचेष्टा: + अक्रोधा and sandhi was applied twice.

462 Perhaps the image suggested by “a fire with an oblation” is that of the Pravargya, in which a large flame rises suddenly from the ritual fire.

463 The idea seems to be that there is no time to consult the verbose āyurvedic teachings. The “extensive meaning of the collection of statements (वाक्समूहार्थविस्तार)” is singled out as one of Āyurveda’s virtues in 5.8.142 (Su 1938: 594). Alternatively, perhaps the patient is unable to understand what the doctor is saying to him.

464 In the next passage, the symptoms of snake poisoning are indeed explained under three headings.

## [Symptoms of snakebite]

- 37 In this context, the poison of a Darvīkara causes the skin, nails, eyes, mouth, urine, feces, and the bitemark to be black; there is driness, the joints hurt and the head feels heavy; the waist, back and neck feel weak; there is yawning, the voice becomes faint, there is gurgling, paralysis, dry throat, cough, wheezing, and hiccups; the wind goes upwards, the patient convulses with sharp pain, black saliva dribbles out, foam appears, the ducts (*srotas*) are blocked and every kind of pain that is due to wind.<sup>465</sup>

The poison of a Maṇḍalin causes the skin, nails, eyes, teeth, mouth, urine, feces, bitemark to be yellow; there is a desire for cold, a temperature, giving off fumes,<sup>466</sup> a burning feeling, thirst, intoxication, fainting, fever, haemorrhaging (*śonitāgamana*), and the degeneration of the flesh and fat above and below. There is swelling, suppuration of the bite, metamorphopsia (*viparītadarśana*), anger caused by the suffering, and every kind of pain that is due to bile.<sup>467</sup>

The poison of a Rājīmat causes the skin, nails, eyes, teeth, mouth, urine, feces, and bitemark to be pale; there is a cold fever, the hair stands on end, there is stiffness and swelling of the limbs including the site of the bite. There is a discharge of viscous phlegm, vomiting, itchy eyes, and a rattling sound. The breath is obstructed and there is every kind of pain due to phlegm.

- 38 In that context, “someone bitten by a male gazes upwards, by a female horizontally, and by a neuter, downwards.” One bitten by a pregnant snake has a pale face and becomes swollen (*ādhmāta*). One bitten by a recently-delivered snake is afflicted with abdominal pain and urinates

465 Cf. the similar symptoms of snake venom poisoning by the so-called Brahmin warriors of Harmatelia described by the classical author Diodorus Siculus (fl. ca. 30-60 BCE) (egge-1975).

466 The term “giving of fumes (परिधूपयन)” is not in **moni-sans** as such, although परिधूपन, परिधूमन and परिधूमायन are cited and referred to the *Suśrutasaṃhitā*. “Giving off fumes (परिधूपन)” is listed at *Suśrutasaṃhitā* 2.6.13 (Su 1938: 291) amongst the symptoms of urinary disease caused by phlegm. The editors note a variant reading परिधूमायन but do not tell us in which manuscript (Su 1938: 291, n. 3). Ḍalhaṇa on 2.6.13 (Su 1938: 292) glossed परिधूपन as “hot all over (समन्ततस्तापः)” and in our current passage as “hot over the whole body (सर्वाङ्गसन्तापः)” (Su 1938: 573). See also **josi-maha**: धूमायन “अङ्गानां धूमोद्धमनमिव” citing the *Suśrutasaṃhitā*.

467 **ghos-2023** describes visual disturbances due to snake envenomation.

with blood. One bitten by a hungry snake craves food. Those bitten by an old snake have delayed and slow reactions. And one bitten by a young snake is fast and keen. One bitten by a non-venomous snake has the characteristic mark of non-poisoning.<sup>468</sup> Some that are bitten by a blind snake become blind. A constrictor (*ajagara*) is deadly because it swallows, not because of poison.

[toxic reactions]

39 In that context, all snake toxins have seven toxic reactions.<sup>469</sup>

[**Darvīkaras**] Thus, at the first pulse of the Darvīkaras the poison corrupts the blood. That corrupted blood turns black. Because of that, blackness and a feeling of ants crawling about on the body develop.<sup>470</sup> In the second pulse, it corrupts the flesh. That causes extreme blackness and lumps.

In the third, it corrupts the fat. That causes a discharge at the bite, heaviness of the head and an eclipse of the vision.<sup>471</sup>

In the fourth, it penetrates the trunk of the body (*koṣṭha*). From there, it irritates the humors, particularly phlegm. That causes exhaustion and oozing phlegm, and dislocation of the joints.

In the fifth pulse, it penetrates the bones. That causes breaking of the joints, hiccups and burning.

In the sixth pulse, it penetrates the marrow. That causes humours in the seat of fire in the gut (*grahaṇī*), heaviness of the limbs, diarrhoea, pain in the heart and fainting.<sup>472</sup>

In the seventh, it penetrates the semen and greatly irritates the vyāna breath (*vyāna*), and causes the phlegm (*kapha*) to run imperceptibly out of the tubes (*srotas*). That causes the appearance of mucous (*śleṣman*),

468 The grammar of अविषलिङ्गम् is not quite right; it should be a masculine or plural bahuvrīhi.

469 Cf. the same concept in the context of plants, at 133

470 Strictly, we would expect a dual verb here, instead of the plural of the witnesses.

471 Dāhāṇa on 5.4.39 (Su 1938: 574) glossed the last expression as “blockage of the vision (दृष्ट्यवरोध).”

472 The “seat of fire in the gut (ग्रहणी)” is an ayurvedic organ in the digestive tract that does not correspond to any specific organ known to contemporary anatomy. For discussion, see josi-mahameul-1974das-2003.

breaking of the hips, back and shoulders, impediment to all movements and shortness of breath.

**[Mandalins]** Thus, at the first pulse of the Mandalins, the poison corrupts the blood. Corrupted by that, it turns yellow. That causes a yellow appearance and a feeling of heat all over (*paridāha*).

In the second pulse, it corrupts the flesh. And that causes the limbs to be very yellow and an extreme feeling of heat all over (*paridāha*), and swelling at the bite.

In the third, it corrupts the fat. That causes a discharge at the black bite and sweating.

In the fourth, it penetrates as before and brings on fever.

In the fifth, it causes heat in all the limbs.

In the sixth and seventh, it is the same as before.

**[Rājīmats]** Thus, in the first pulse of the Rājīmats, the poison corrupts the blood. Corrupted by that, it turns yellow. It causes a person to have hair standing on end and a pale appearance.

In the second pulse, it corrupts the flesh. That causes him to become pale and to become extremely benumbed (*jāḍya*).

In the third, it corrupts the fat. That causes moistness of the bite and runny eyes and nose.

In the fourth, it is the same as before. After penetrating, it brings on manyāstambha (*stiffness of the neck*) and heaviness of the head.

In the fifth, speech is slurred and there is a cold fever.

In the sixth and seventh, it is the same as before.

### [Summary Verses]

40 There are verses on this.

*It is well known that there are seven interstitial layers (kalā) in between the bodily tissues (dhātu). Poison passing through these one by one produces the toxic reaction (vega).<sup>473</sup>*

<sup>473</sup> See note 433 above.

- 41      *The interval taken by the deadly substance (kālakalpa), propelled (√ūh) by air (samīraṇa), to cut the layers of skin is known as the “pulse interval (vegāntara)”.*<sup>474</sup>
- 42      *In the first pulse, an animal has a swollen body, is distressed and broods.*<sup>475</sup>
- In the second, it dribbles somewhat,<sup>476</sup> the hair stands up on its body, and it has pain (√pīḍ) in the heart.*
- 43      *The third stage brings headache and it breaks the ears and necks.*<sup>477</sup>
- In the fourth, the bewildered creature trembles and gnashing its teeth, it gives up life.*
- 44–45      *Some experts say that elephants have three toxic reactions.*<sup>478</sup>
- So, at the first toxic reaction, an bird becomes bewildered and is confused from that point on. At the second, the bird is distressed and, crying out, it dies.*
- Some people claim that where birds are concerned, there is really just a single toxic reaction (vega) and that amongst animals like cats and mongooses, poison does not take much effect.*<sup>479</sup>

474 Ḍalhaṇa on 5.4.41 (Su 1938: 574) glossed कालकल्प as मृत्युसदृशं विषं “the poison resembles death.”

475 The verb √प्रध्वै “meditate, be thoughtful, brood” is unexpected here and in the second class, an epic form. Ḍalhaṇa on 5.4.42 (Su 1938: 574) noted that some manuscripts did not include the text about animals from this point on. The fact that these verses are present in the Nepales witnesses testifies to their antiquity.

476 The Nepalese witnesses use लालि-, not लाला-, for “saliva.”

477 The scribe of MS H emended the text to read कण्ठग्रीव with the vulgate. Intransitive use of pass. भञ्ज्.

478 On अन्तःस्वेद as “elephant,” cf. *Arthaśāstra* 9.1.46 (Kangle 1965: v.1, 219; Olivelle 2013: 351): हस्तिनो ह्यन्तःस्वेदाः कुष्ठिनो भवन्ति ॥ ४६ ॥.

479 See on this subject: brun-1909mint-1969 (references taken from HIML: 1B, 399, n. 124).



# Kalpasthāna 5: Therapy for those Bitten by Snakes

## Introduction

## Literature

A brief survey of this chapter's contents and a detailed assessment of the existing research on it to 2002 was provided by Meulenbeld.<sup>480</sup>

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<sup>480</sup> [HIML](#): IA, 294–295. In addition to the translations mentioned by Meulenbeld ([HIML](#): IB, 314–315), a translation of this chapter was included in P. V. Sharma [1999–2001](#): 3, 35–45.

## Translation

Passage numbers refer to the canonical numbering of the vulgate edition (*Su* 1938).

- 1 Now we shall explain the procedure (*kalpa*) that is the therapy for someone bitten by a snake.<sup>481</sup>
- 3 For a person bitten on a limb by any snake, one should first of all make a strong binding, at four fingers measure above the bite.<sup>482</sup>
- 4 Poison does not move around into the body if it is prevented by bandages (*ariṣṭā*) or by any other soft items of cloth (*plota*), leather (*car-mānta*) or bark.<sup>483</sup>
- 5 Where a bandage (*bandha*) is not suitable, one should raise the bite up and then cauterize it.<sup>484</sup> Suction, cutting and cauterizing are recommended in all cases.
- 6 Suction will be good after filling the mouth with earth (*pāṃśu*).<sup>485</sup> Alternatively, the snake should be bitten by the person who knows that they have just been bitten.<sup>486</sup>

481 On कल्प, see note 437.

482 Application of a tourniquet is deprecated by modern establishment medicine, which relies on antivenom medications (*pill-2013*).

The vulgate introduces the word अरिष्टा at this point. This may be a borrowing from Ci.23.251cd (*Ca* 1941: 582).

483 It is hard to translate the word अरिष्टा otherwise than “bandage,” as referred to by बन्धियात् in the previous verse, and apparently similar to items of cloth etc., and called a बन्ध in the next verse. But in general Sanskrit literature, including medical literature, the word (in masc. gender) means either “an alcoholic tonic” or “an omen of death,” (1.30.3 (*Su* 1938: 137)), or is a plant name. This raises a question mark over its unique meaning in the present context. The *Aṣṭāṅgahṛdayasaṃhitā* (Utt.36.42cd (*Ah* 1939: 910)) seems to be a gloss on अरिष्टा, saying “An expert in mantras may bind using a braid made of silk etc., empowered with mantras” (see also 5.5.8 (*Su* 1938: 575)). On problems that can arise from tying a bandage too tightly, see 5.5.56 (*Su* 1938: 577) below.

484 The vulgate reads उत्कृत्य “having excised” rather than translate उद्धृत्य “having raised up.”

485 The vulgate recommends cloth, not earth (5.5.6 (*Su* 1938: 574)).

486 The syntax is odd here, and the vulgate has removed the difficulties. Ḍalhaṇa on 5.5.6 (*Su* 1938: 574) noted that one should hold the snake firmly and give a good bite to its head and tail (हस्ताभ्यामुपसंगृह्य पुच्छे वक्रे च सर्पः सम्यग् दष्टव्यः). Our colleague Dr Madhu K. Paramesvaran reports that this procedure is known in Malayalam *viṣavaidya* treatises and is practiced in Kerala, though rarely: “this practice has been described as one of

- 7 Now, one should in no way cauterize someone bitten by a Maṇḍalin. Because of the over-abundance of poison in the bile (*pittaviṣa*), that bite will be lethal as a result of cauterization.<sup>487</sup>

### The application of mantras

- 8 An expert in mantras should tie on a bandage (*ariṣṭā*) too, with mantras. But they say that a bandage that is tied on with cords and so on causes the poison to be purified.<sup>488</sup>
- 9 Mantrās prescribed by gods and holy sages (*brahmarṣi*), that are imbued with truth and religious power (*tapas*) are inexorable and they rapidly destroy intractable poison.
- 10 Drugs cannot eliminate poison as quickly as the application of mantras imbued with religious power (*tapas*) and imbued with truth, holiness (*brahma*) and religious power.<sup>489</sup>
- 11 The mantras should be received by a person who is abstaining from women, meat and mead (*madhu*), who has a restricted diet, and who is pure and lying on a bed of *halfa* grass.
- 12 For the mantras to be successful, one should diligently worship the deity (*devatā*) with perfume, garlands, and oblations (*upahāra*), as well as sacrificial offerings (*bali*), and with mantra repetition (*japa*) and rituals.<sup>490</sup>

the first-response cares for snakebite in most of the Malayalam texts of Viṣhavaidya. I have never seen this happening in real life and my teachers used to consider it to be a method (albeit a bit outrageously dangerous) for self-reassurance by the patient.” (*para-2023*). Cf. the Viṣhavaidya text edited by *maha-1958*.

487 Verses 5.4.29, and 37 above note that the venom of Maṇḍalins particularly irritates the bile.

488 Ḍalhaṇa on 5.5.8 (*Su 1938*: 575) clarified that on the one hand the bandage must be accompanied with mantras, but on the other hand, it may also be used without mantras. The verse seems to put two points of view.

489 Ḍalhaṇa on 5.5.10 (*Su 1938*: 575) noted that mantras like “kurukullā” and “bheruṇḍā” are explained in other treatises and therefore not explained further in his commentary. These two mantras are the names of tantric Śaiva and Buddhist goddesses. For a study on this specific subject see *slou-2016b*. *HIML*: IIB, 151, n. 344 provides a bibliography to 2002 of studies on Kurukullā, who is mentioned in Māhuka’s *Haramekhālā*, and *meul-2008b* includes discussion of Bheruṇḍa as a bird, with related terms.

490 Ḍalhaṇa on 5.5.12 (*Su 1938*: 575) noted that उपहार includes incense, while बलि refers to sacrifice with an animal (सपशुनैवेद्य).

- 13 But mantras pronounced illicitly or that are deficient in accents (*svara*) and letters do not give success. So antitoxic (*agada*) procedures need to be employed.

### Blood letting

- 14 A skilled physician should puncture a duct (*sirā*) which is located on the limb (*śākhāśrayā*), and comes from the bite and the general area. If the poison has spread, one on the forehead should be pierced.
- 15 The blood being drawn out draws away all the poison.<sup>491</sup> Therefore one should cause blood to flow, for that is his very best procedure.
- 16 After incising (*pracchāna*) the area around the bite, one should smear it with antidotes and sprinkle it with water infused with sandalwood and cuscus grass.<sup>492</sup>

### Internal medications

- 17 One should make him drink various antidotes together with milk, honey and ghee. If they are unavailable, the earth of black ants can be good.<sup>493</sup>
- 18 Alternatively, he should consume orchid tree, siris and purple calotropis or white siris too. He should not drink sesame oil or horse gram, nor wine or Indian jujube.
- 19 But after drinking any other liquid at all, he should throw up after drinking it. For on the whole, poison is easily removed by means of vomiting.

491 The Nepalese version uses a present passive participle construction here, that is less common than the vulgate's locative absolute. The Nepalese version states that it is the blood coming out of the patient that carries away the venom; the vulgate text says merely that the venom emerges while the blood comes out.

492 प्रच्छान् is the second of the two methods of blood letting described in the vulgate text of the *Suśrutasaṃhitā* at 1.14.25 (Su 1938: 64); this verse does not appear in the Nepalese version of the *Suśrutasaṃhitā*.

493 This refers to earth taken from an anthill. In South Asia, there is a long tradition of considering such earth to be beneficial and even holy (irwi-1982).

## Therapies at each pulse of toxic reaction

- 20 In the case of hooded snakes, when there is a toxic reaction (*vega*) first one should let blood. At the second, one should make him drink an antidote (*agada*) together with honey and ghee.<sup>494</sup>
- 21 At the third one should use errhines and collyrium (*añjana*) that destroy poison.<sup>495</sup> At the fourth, when he has vomited, the physician should make him drink a gruel (*yavāgū*) that destroys poison.
- 22 At the fifth and sixth toxic reactions one should make the person drink something that aids cooling, that is cleansing and *tīkṣṇa* (*sharp*), and a well-regarded gruel too.
- 23 But at the seventh, one should purge (*śodh*) his head with a sharp sternutatory.<sup>496</sup>

## In the case of Maṇḍalins

- 24 Amongst Maṇḍalins, the earliest toxic reaction (*vega*) should be treated in the same way as with Darvīkaras.<sup>497</sup>
- 25 At the second, one should make him drink ghee and honey and then make him vomit.<sup>498</sup>
- 26 At the third, one should give the purged patient healthy gruel. At the fourth and the fifth too, one should do the same as for the Darvīkara.

<sup>494</sup> This section reproduces some of the therapies from *Suśrutasamhitā* 5.2.40–43 (*Su* 1938: 566) on the stages of slow poisoning (*dūṣṭvīṣa*) by plant poisons; see translation on p. 133 above.

<sup>495</sup> The rare word नस्तः “from or into the nose” in नस्तःकर्म “errhine” is supported by both Nepalese manuscripts. The term is more common in the *Carakasamhitā*, occurring eleven times, e.g., at 1.20.13 (*Ca* 1941: 114), 2.1.36 (*Ca* 1941: 203), *et passim*.

The *Carakasamhitā* describes how collyriums, especially रसाञ्जन, cause phlegm to flow, thus clearing the eyes (1.5.14–19 (*Ca* 1941: 38–39)). This could be appropriate in expelling poisons.

<sup>496</sup> The vulgate adds a half-verse here recommending the application of a collyrium (*añjana*) to a cut made on the patient’s head.

<sup>497</sup> The vulgate again adds a half-verse here, recommending the “crow’s foot” incision on the patient’s head. On this procedure, described in *Carakasamhitā* 6.23.66–67 (*Ca* 1941: 574), see *wuja-2003*. This text is not supported here, as it was not in the Nepalese text at *Suśrutasamhitā* 5.2.43 (*Su* 1938: 566) either. See footnote 380, p. 134 above. As stated there, it appears that this procedure was known in the tradition of the *Carakasamhitā*, but not in the earliest text of the *Suśrutasamhitā*.

<sup>498</sup> Again, the vulgate text differs substantively, adding another half-verse. But the general idea of the treatment is the similar.

- 27 At the sixth, wholesome things from the group of plants starting with **cottony jujube** should be drunk and a sweet antidote.<sup>499</sup> And at the seventh, a wholesome antidote that destroys poison in a sternutatory (*avapīḍa*).<sup>500</sup>

### In the case of Rājimats

- 28 Now, Amongst Rājimats, one should let blood at the first toxic shock.<sup>501</sup>  
 29 At the second, a patient who has vomited should be made to drink an antidote that destroys poison. At the third, fourth and fifth, the rule that applies to the Darvīkara is suitable.  
 30 At the sixth, use a very sharp collyrium (*añjana*), and at the seventh a sternutatory (*avapīḍa*). There is a prohibition on using blood-letting for pregnant women, children and the elderly.  
 31ab In those who are in pain because of poison, it is advised that the prescribed procedures be applied gently.

### 31ab In animals

- In goats and sheep, bleeding and collyriums are the same as for people.  
 32cd In cows and horses, that is twice as much; three times as much for buffaloes and camels, four times for elephants and simply (*kevala*) for all birds.<sup>502503</sup>

write note  
on par-  
isekān pra-  
dehāms

499 The “group of 17 plants beginning with **cottony jujube**” (काकोल्यादि गण) is described at *Suśrutasamhitā* 1.38.35–36 (Su 1938: 167). These plants pacify the bile, blood and wind and increase phlegm, body-weight, semen and breastmilk.

500 The अवपीड is described at *Suśrutasamhitā* 4.40.44–45 (Su 1938: 556), where it is also recommended for victims of snakebite. It is a type of head-evacuant. Commenting on that passage, Ḍalhaṇa cited “other treatises” as saying that अवपीड treatment was suitable for restoring the consciousness of those who have been poisoned. He also quoted a text by an authority called Videha, that says the same. Videha was an author known to Ḍṛḍhabala (according to Cakrapāṇidatta) and often cited in the *Madhukośa* on the topic of eye diseases (HIML: IA, 132 *et passim*). See also **josi-maha**.

501 The vulgate text says that the blood-letting should be done with a **gourd**. It also has an extra half-verse here, prescribing an antitoxin to be drunk together with honey and ghee.

502 Ḍalhaṇa on 5.5.32 (Su 1938: 576) explained “simply for all birds” as meaning that birds should receive just drugs, and not blood-letting or collyriums. See p. 158 for the toxic reactions in birds and other animals.

- 34 One should consider carefully with one's intellect the location, constitution (*prakṛti*), suitability (*sātmya*), the season, the poison, and the strength or weakness of the toxic reaction and then proceed with therapy.<sup>504</sup>
- 47–48ab One should eliminate this poison completely. It is extremely hard to overcome. For even a small amount remaining can strongly bring about a toxic reaction.<sup>505</sup>
- 48cd–49 Or it may lead to dejection, pallor, fever, cough and headaches, dessication, swelling, catarrh, poor vision, disinterest in food (*aruci*) or rigidity (*jāḍyatā*).<sup>506</sup> And in such cases one should apply the cure as appropriate.<sup>507</sup>
- 50–51ab One should also treat the secondary ailments (*upadrava*) of a poisoned patient each as appropriate.  
Now, after the bandage (*ariṣṭā*) has been removed and after the place marked by it has been quickly incised (*pracchāna*) one may see poison that has leaked out there, and a toxic reaction may strongly result.

503 The vulgate includes several verses after this sentence that give a recipe and also a list of specific items like place and constitution that should be given careful consideration. Ḍalhaṇa on 5.5.33 (Su 1938: 576) cited the opinions of Gayadāsa and Jejjāta on this recipe but stated that he preferred to follow the contrasting opinions of Vṛddhavāgbhaṭa (1.25.24cd–25aba (As 1980: 184)) and Suśruta (4.31.29cd–30ab (Su 1938: 511)) on this topic, as well as several citations “another work” (तन्त्रान्तर) that is unidentified.

504 The vulgate here has twelve verses not found in the Nepalese version. These verses explicitly switch subject away from assessments according to toxic reactions and to the treatment of both mobile and immobile poisons, starting from physical symptoms such as swelling and discolouration as well as humoral theory. At the point where the vulgate summarizes the extra verses, saying that cases should be treated “according to their humors” (यथादोषं), the Nepalese witnesses have “as is appropriate” (यथायोगं, 5.5.49cd (Su 1938: 577)). This suggests that the text has been edited to fit the insertion of the verses referring to humoral therapy. These verses also include therapies such as the crow's foot treatment (see footnotes 380 and 497, pp. 134, 163 above) and the beating of drums that have been smeared with antidotes, as discussed in *Suśrutasaṃhitā* 5.6 (Su 1938: 580–582) (see p. 169 below).

505 The word अवतिष्ठ “remaining” is hard to parse. It cannot be a णमुल् formation (Pāṇini 3.4.22 ff), because of the root's reduplication, and should not be a present participle because it is not neuter. However, lack of gender concord is not unknown in Epic Sanskrit; several of the examples cited by ober-2003 even involve present participles without gender concord. Cf. edge-1953 for examples in BHS.

506 Ḍalhaṇa on 5.5.49ab (Su 1938: 577) reported a reading from Jejjāta of स्तैमित्य “immobility” instead of प्रतिश्याय “catarrh.”

507 The vulgate introduces दोष theory here, which is absent in the Nepalese version.

- 52.1 Once the poison has disappeared one can conquer irritated wind using items that restrain the wind.<sup>508</sup>
- 53 One can conquer bile using substances that remove bile-fever (*pittajvara*), with decoctions, oleation and purges, combined with substances that remove poison, with the exception of sesame oil (*taila*), wine, horse gram, and mangosteen.<sup>509</sup>
- 54 One can conquer phlegm with the group that starts with golden shower tree, together with honey.<sup>510</sup>
- 56 *If the the bandage (ariṣṭā) is bound tightly, or if it is incised (pracchita) with sharp ointment or with the remnants of the poison, then when the limb swells up, the the flesh weeps, smells a great deal, is putrid (śīrṇa) is designated “poison-stink (viṣapūti).”<sup>511</sup>*
- 57–58ab *One may be certain that a person has been struck by something poisoned (digdha) if their wound immediately starts to suppurate has black blood that flows and is inflamed, as well as having black, weeping and exceptionally foul-smelling flesh coming out of the wound and also someone who has thirst, fainting (mūrcchā), fever and a temperature.<sup>512</sup>*
- 58.1–60 *One who is known to have these exact symptoms may have poison in their wound that is † given by mistake.† And they may have a wound that has been hit by something poisoned (digdha) and is full of poison. And others are sick because of a wound that stinks because of poison. The wise person debrides the excess flesh of such people and then, after removing the blood by means of leeches and after removing the humours from above and below, he should irrigate with cold bark decoctions from milky trees. And he should ap-*

508 This half-verse is not present in the vulgate, but has broadly the same sense as 5.5.52cd (Su 1938: 577), that is not present in the Nepalese version.

509 The vulgate reads “fish” in place of “wine.”

510 The आरम्बधगण is listed at *Suśrutasamhitā* 1.38.6 (Su 1938: 164). These herbs are there explicitly said to pacify phlegm and to remove poison, etc. (1.38.7 (Su 1938: 164)).

511 *Suśrutasamhitā* 5.5.16 (Su 1938: 575) (p. 162 above) suggests smearing an incised area with antidotes.

512 The Nepalese witnesses describe someone who has been struck or hurt (क्षत, आहत), while the vulgate describes someone who is pierced (विद्ध). Ḍalhaṇa on 5.5.58ab (Su 1938: 576) interpreted the latter wording as being struck by a poison-smeared arrow.



*ply items that destroy poison such as cloths containing ointments together with cold liquids mixed with ghee.*

61–62 *When the bone is injured with poisons, the very same rule as in bile poison should be followed. One should place the following in a horn: turpeth, weaver's beam tree, liquorice, the two kinds of turmeric, the Indian madder group, and all kinds of salt.*

78 513

there is no  
mañjiṣṭhā  
varga.  
There is a  
lavanavarga  
(1.46.313–  
321  
(Su 1938: 236–  
237))

why are  
varga and  
lavāna in  
the nomin-  
ative; they  
should be  
the object  
of nidad-  
hyāt.

513 After this verse, the vulgate text adds five verses, 79–83, that do not appear in the Nepalese version.



# Kalpasthāna 6: Beating Drums

## Introduction



# **Uttaratantra**



# Uttaratantra 17: Preventing Diseases of the Pupil

## Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.<sup>514</sup>

The history of couching in India has been discussed since the nineteenth century,<sup>515</sup>

The therapies in this chapter make frequent use of collyrium (*añjana*). This substance and its uses and variants are described in *Carakasamhitā* 1.5.14–19 (Ca 1941: 38–39). In the *Suśrutasamhitā*, they are included in the “group starting with *añjana*” (*añjanādigana*), that is listed at 1.38.41–42 (Su 1938: 167). They are described as valuable for counteracting blood-bile (*raktapitta*), poison and overheating (*dāha*).

## Translation

- 1 Now I shall explain the counteraction (*pratiṣedha*) of diseases located in the pupil (*drṣṭi*).
- 2 There are three curable (*sādhya*), three incurable (*asādhya*), and six mitigatable (*yāpya*) diseases located in peoples eyes. Among these, three are curable (*sādhya*). Amongst these three, the remedy (*pratīkāra*) has been stated for the one called “seeing smoke (*dhūmadarśin*)”.<sup>516</sup>

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<sup>514</sup> [HIML](#): IA, 305–306.

<sup>515</sup> desh-2000; desh-1999; bret-1826; leff-2020; shas-kaly; jack-1884; scot-1817; elli-1918; hend-1895; fan-2005; wuja-2003.

<sup>516</sup> This disease and its cure are described earlier (SS.6.7.39 and SS.6.10.16 (Su 1938: 609

3–5ab When the eye is inflamed (*vidagdha*) by bile and when it is inflamed by phlegm, one should apply the method for removing bile and phlegm, using nasal medicines (*nasya*), irrigation (*seka*), application of collyrium (*añjana*), liniment (*ālepa*), and medicines cooked in a crucible (*puṭapāka*), together with an eyewash (*tarpaṇa*),<sup>517</sup> but not cutting with a blade (*śastrakṣata*).<sup>518</sup>

where is cutting with a knife related to removing bile or phlegm.

One should drink ghee (*sarpis*) prepared with the three fruits (*triphalā*) and in the first [case where the problem is bile], and prepared with turpeth (*traivṛta*) in the latter [case, of phlegm].

And ghee prepared with tilvaka (*tailvaka*) is wholesome in both cases, or else aged ghee on its own.

5cd–7ab In a collyrium (*añjana*), these four compounds (*yoga*) are beneficial in both cases:

- ochre (*gairika*), Sind salt (*saindhava*), long pepper (*kṛṣṇā*) and the black soot (*maṣī*) from cow's teeth;
- Cow's flesh (*gomāṃsa*), **black pepper**, **siris** and red arsenic (*man-aḥśilā*);
- stalk (*vṛnta*) from a **wood apple** with honey (*madhu*);<sup>519</sup>
- or the the fruits of the ??.

maṣī  
burned  
charcoal.  
Find refs.

8 The physician should make a collyrium (*añjana*) with ground up metal (*kupyaka*),<sup>520</sup> **Asoka tree**, **sal tree**, **mango**, **beautyberry**, **lotus**, **blue water-lily**, together with **peas**, **emblic**, **myrobalans**, **long pepper**. It should be combined with ghee and honey (*kṣaudra*).

9–10 Also, when bile and phlegm have developed, the physician should apply **peas** with the expressed juice (*svarasa*) of the flowers from **mango** and **jambul** trees.

Then this collyrium (*añjana*), matured (*vipakva*) with ghee and honey (*kṣaudra*), should then be applied.

and 614) respectively). The latter part of this verse is hard to construe and the text here may have been altered at an early period.

517 These therapies are described in SS.6.18 (*Su* 1938: 633–640).

518 Dalhaṇa interpreted this as blood-letting (*sirāvedha*), which is discussed in SS.1.14 (*Su* 1938).

519 Wood apple (कपित्थ) in this verse is ablative singular or accusative plural, neither of which construe obviously.

520 A metal other than gold or silver, according to *josi-maha* (on कुप्य). The Nepalese witnesses have the rare कुप्यक rather than the vulgate's कुब्जक, which makes no real sense. Perhaps lead, which is used in making contemporary collyrium.



- 10–11ab Filaments (*kiñjalka*) of **lotus** and **blue water-lily**, with ochre (*gairika*), and the juice of cow-dung (*gośakṛt*) are a collyrium (*añjana*) in the form of a pill (*guḍikā*). This is good for both day and night blindness.
- 11cd–12ab Elixir-salve (*rasāñjana*), honey (*kṣaudra*), ghee, **scramberry**, together with gold and ochre, with the juice of cow-dung (*gośakṛt*) are for an eye afflicted with bile.
- 12cd–13 Alternatively, wise physician should first grind together elixir-salve (*śīta*) and stibnite (*sauvīraka*), infused (*bhāvita*) with the blood of birds and animals (*rasa*).<sup>521</sup> Then he mixes it with the bile of a tortoise or with extract of rohu carp (*rauḥita*). It should always be used with powdered collyrium (*añjana*) to quell the bile.
- 14 Thus, a collyrium (*añjana*) of **white teak** flowers, **liquorice**, **Indian barberry**, **lodh tree** and elixir salve (*rasāñjana*) is always good as a collyrium in this case.
- 15 Alternatively, for those who cannot see during the day, this pill (*guḍikā*), with sandalwood, is recommended: salt (*nadīja*), conch shell and the three spices, collyrium (*añjana*), realgar (*manaḥśilā*), the two turmeric (*rajana*)<sup>522</sup> and liver extract (*yakṛdrasa*).<sup>523</sup>
- 16 One should grind up kohl (*srotoja*),<sup>524</sup> and Sind salt (*saindhava*) and long pepper and also hareṇu (*hareṇu*). Such wicks with goats urine are good in a collyrium (*añjana*) for night blindness (*kṣaṇadāndhya*).
- 17–18ab Alternatively, in such a case, grind together Indian sarsaparilla (*kālānusāriva*)<sup>525</sup> long pepper, dried ginger (*nāgara*) and honey, the leaf of the scramberry (*tālīśapatra*), the two turmeric (*rajana*), a conch shell and liver extract (*yakṛdrasa*). Then shade-dried wicks take away illness (*ruj*).
- 18cd–19ab Wicks made of red arsenic (*manaḥśilā*), chebulic myrobalan (*abhayā*), the three spices (*vyoṣa*). Indian sarsaparilla (*sāriva*), cuttlefish bone (*samudraphena*), combined with goat's milk are good.

<sup>521</sup> This was Ḍalhaṇa's preferred interpretation of *rasa* "juice" in this context. He also noted that some take elixir-salve (*śīta*) to be camphor.

<sup>522</sup> Turmeric (*Curcuma longa* Linn.) and tree turmeric (*Berberis aristata* DC). The term *rajana* is unusual; the normal term is *rajanī*. *Rajana* occurs in *Suśrutanighaṇṭu* 158 in the sense of *Ferula asafoetida*, Linn.

<sup>523</sup> This verse appears as no. 27 in the vulgate.

<sup>524</sup> Glossed by Ḍalhaṇa as a kind of collyrium (*añjana*). Cf. **nadk-1954** and **shar-1982**

<sup>525</sup> There are two forms of *sārivā* mentioned widely in Āyurvedic literature, the white and the black. Ideas on the identity of the black form are particularly fluid. See **adps** for a clear discussion.

- 19cd–21ab One should cook a honey collyrium (*kṣaudrāñjana*) either in the juices of cow's urine (*gomūtra*), and bile, spirits (*madirā*), liver (*yakṛt*), and emblic (*dhātrī*) or else in the juice of the liver (*yakṛt*) of something different, or else with the extract of the three fruits (*triphalā*). One of these should be mixed with cow urine, ghee and cuttle fish (*aṇṇavamala*)<sup>526</sup> with long pepper, honey and box myrtle (*kaṭphala*). It is placed in sea salt and stored in a bamboo tube.
- 21cd–22 One should cook the liver of a sheep, the ghee of a goat, with long pepper and Sindh salt, honey and the juice of emblics. Then one should store it properly in a catechu box. Prepared thus, the honey collyrium (*añjana*) is good.
- 23 Alternatively, a collyrium (*añjana*) that is hareṇu (*hareṇu*) mixed with long pepper (*māgadhi*), the bone and the marrow of a goat, cardamom (*elā*) and liver, together with liver extract, is good for eyes afflicted by phlegm.<sup>527</sup>
- 24 Over a fire, one should cook the liver (*yakṛt*) of a monitor lizard (*godhā*) prepared with entrails (*antra*) and stuffed with long pepper (*māgadhi*). As is well known, liver (*yakṛt*) which is used (*niṣevita*) with collyrium (*añjana*) certainly destroys night blindness.
- 25 After preparing both a spleen (*plīhan*) and a liver on a spit, one should eat them both with ghee and oil.<sup>528</sup>
- 25cd–26ab As is well known, there are six diseases that can be alleviated (*yāpya*); in those cases (*tatra*) one should release the blood by bloodletting. And for the sake of wellbeing one should also purge using aged ghee combined (*upahita*) with purgative aids (*aṅga*).

526 At SS 6.12.31, Ḍalhaṇa glossed *aṇṇavamala* as cuttlefish bone (*samudraphena*). It may be worth considering whether the unusual term *aṇṇavamala* "ocean-filth" might refer to ambergris.

527 On the identities of *elā* and *hareṇu*, **watt-comm** described the former as "true" or "lesser" or "Malabar" cardamom, *Elettaria cardamomum*, Maton & White. In contrast, the "greater" cardamom is *Amomum subulatum* (that Watt discussed on p. 65) that is commonly used as an inferior substitute for *E. cardamomum*. **gvdb** provided an interesting discussion of *hareṇu*, noting that the term refers to two substances, first the *satīna* pulse (*Pisum sativum*, Linn.), and second an unknown fruit such as perhaps a *Vitex*. They noted, "None of the text commentators have attempted to disclose the nature of its source plant," although Ḍalhaṇa described it as aromatic and identical to *reṇukā* (SS.ci.2.75).

528 We read the locative as if an instrumental; if the locative were intended then it would be the spit that would be coated with oil and ghee.

- 26cd–27 When an eye-disease is caused by wind (*pavanodbhava*) they say that castor oil (*pañcāṅgulataila*) mixed with milk is good.<sup>529</sup> In the case of diseases of blood (*śonita*) and bile (*pitta*), one should drink ghee with the three fruits; it is particularly cleansing.<sup>530</sup> In the case of phlegm, a purgative by means of turpeth (*trivṛt*) is recommended. In the case of all three humours, sandal (*sugandhi*) in oil is prepared with it (turpeth).<sup>531</sup>
- 28 In cases of partial blindness (*timira*), aged ghee is recommended. It is good if it is kept in an iron vessel.
- 28cd–29ab One should know that ghee with the three mylobalans is always good, and it is made with what is called periploca of the woods (*meṣaviṣāṇa*). A man who is suffering from partial blindness should lick the finely-ground three fruits mixed with ghee off his hand (*sapāṇa*).<sup>532</sup>
- 29cd Alternatively, someone afflicted by phlegm should apply them (the three fruits) mixed with oil and steeped (*pragāḍha*) in honey.
- 30 The very best oil, well-cooked with a decoction of cow-dung, is good in cases of partial blindness, taken as an errhine.  
In cases caused by bile, ghee by itself is good, as is oil when it arises from wind and blood.
- 31 And in the case of wind one should apply turpeth (*trivṛt*) based on strong mallow (*atibalā*), and country mallow (*balā*) in an errhine (*nasya*).<sup>533</sup>  
Ghee which has been extracted from milk cooked with the meat of aquatic creatures and those from marshlands should be prescribed.
- 32 †An enclosed roasting (*puṭākhyā*) with Sindh salt and the product of the meat of a carnivore (*kravyabhuj*) and a deer (*eṇa*), is combined with

529 Ḍalhaṇa said that the unexpressed topic of this recipe is partial blindness (*timira*).

530 Blood-bile (*śonita-pitta*, *rakta-pitta*) is a widely-recognized disease in ayurveda, but the compound here is definitely dual, which rules out that interpretation. One would expect blood-bile because the previous verse

531 The expression “the fragrant one in oil (*tailasugandhi*)” is puzzling. The word *sugandhi* has different referents in the *Nighaṇṭu* literature but is not common as a noun in the extant literature. “Sandal” is just one of its possible meanings.

532 “Off his hand” translates the adverbial *sapāṇam*, an unusual word. Ḍalhaṇa reproduced a reading close to the Nepalese recension but says that Jejjāta rejects it and so he also does (Su 1938: 627).

533 “Based on” translates *-āśrita* “depending on” which does not construe easily here. The vulgate has *śṛta* “cooked” which makes easier sense but is not supported by the Nepalese MSS.

honey and ghee.<sup>534</sup>

Fat (*vasā*) from a horse, a vulture, a snake, and a cock (*tāmracūḍa*), combined with mahua (*madhūka*) is always good in a collyrium (*añjana*).†<sup>535</sup>

- 33 Having prepared (*niṣevita*) a collyrium (*añjana*) made of kohl (*srotas*) and gradually combine it with juices (*rasa*), milk and ghee.<sup>536</sup>

For thirty days, this collyrium (*añjana*) is put in the mouth of a black snake that is covered with kuśa grass (*kuśa*).

- 34 Next, a collyrium (*añjana*) that is milk containing long pepper (*māgadhī*), lye (*kṣāraka*) and Sindh salt (*saindhava*) that has been repeatedly prepared with the mouth of a black snake, is good in the case of bloodshot blindness (*rāgin timira*).<sup>537</sup>

- 35 They say that ghee may be produced from that and combined with sweet herbs is good as an errhine for eye-diseases caused by bile. And here, an eyewash (*tarpaṇa*) is good that is a combination that is the flesh of wild animals taken hot (*puṭāhvaya*).<sup>538</sup>

- 36 And realgar (*manaḥśilā*) mixed with elixir salve (*rasañjana*) and honey is a liquid collyrium (*dravāñjana*) which is, in this case, combined with mahua (*madhūka*).<sup>539</sup>

534 Ḍalhaṇa noted (Su 1938: 628a) that *puṭāhvaya* (see verse 35 below) is a synonym for *puṭapāka*, and that the process is described in the *Kriyākālpa* chapter, i.e., SS.6.18.33–38 (Su 1938: 635). On the *puṭa* process in the *Suśrutasamhitā*, which is earlier and different than that of *rasaśāstra* literature, see the discussion by wujad-2019:

The term ‘enclosed roasting’ (*puṭapāka*) does occur in the *Suśrutasamhitā* in the context of eye treatments, but designates a method of obtaining juice from substances by wrapping them in leaves pasted with earth and cooking the bolus on charcoal to finally extract a juice.

535 This verse contain irresolvable difficulties. There are no significant variants in the Nepalese MS transmission, but the text is ungrammatical. The vulgate reads substantially differently but we have nevertheless made some emendations in line with it and read the verse as two sentences.

536 Ḍalhaṇa specified that the juices are meat soups of various animals (Su 1938: 628).

537 Ḍalhaṇa described this blindness as a type of *kāca* disease caused by wind (Su 1938: 628). The expression “bloodshot blindness” is an attempt to capture the idea of a blind eye that is dyed or coloured (not colour-blindness). This verse is quite different from the vulgate and also syntactically challenging.

538 The expression taken hot (*puṭāhvaya*) is a guess.

539 The expression liquid collyrium (*dravāñjana*) is only known from Ḍalhaṇa’s comments on 6.17.11ab (Su 1938: 626). The recipe in the present collyrium is different from that discussed by Ḍalhaṇa.

- Alternatively, experts on this say that finely ground blue vitriol (*tuttha*) extracted from a gold mine is the “same collyrium (*samāñjana*)”.<sup>540</sup>
- 37 Conch mixed with equal parts of sheep’s horn and stibnite (*añjana*) removes the impurity of the glassy opacity (*kāca*) because of the application of collyrium (*añjana*).<sup>541</sup>
- The extracts (*rasa*) produced from aflame of the forest (*palāśa*), Rohīta tree (*rohīta*),<sup>542</sup> mahua (*madhūka*), ground with the supernatant layer (*agra*) of the spirits (*madira*) is applied.
- 38 Alternatively, one should cook an errhine with cuscus grass (*uśīra*), lodh tree (*lodhra*), the three fruits (*triphalā*), beauty berry (*priyaṅgu*) to pacify eye diseases caused by phlegm.<sup>543</sup>
- One should apply smoke of the bark of embelia (*vidaṅga*), velvet leaf (*pāthā*), white siris (*kinihī*), and desert date (*iṅgudī*); and cuscus grass (*uśīra*) alone.
- 39 A ghee that is cooked (*bhāvita*) from a decoction of a non-flowering tree (*vanaspati*)<sup>544</sup> as well as turmeric (*haridrā*) and spikenard (*nalada*) is good in a eyewash (*tarpaṇa*).
- Alternatively, one may have an enclosed roasting (*puṭapāka*) done with arid-land animals (*jāṅgala*)<sup>545</sup> and a plentiful amount of long pepper (*māgadha*), Sindh salt and honey.
- 40 A treatment (*kriyā*) with realgar (*manaḥśilā*), the three spices, conch, honey, along with Sindh salt, green vitriol (*kāsīsa*) and elixir salve (*rasañjana*).<sup>546</sup>
- They say that an elixir salve (*rasañjana*) combined with myrobalans,

540 On *tuttha*, which may also be identified with zinc oxide or as crushed sea-urchin shells, see **folk-1991**; zinc oxide is a component of skin-balms but is not recommended for application in the eyes themselves. The expression “same collyrium (*samāñjana*)” is a hapax legomenon glossed inexplicably by Ḍalhaṇa as “a collyrium with an equal amount of fermented barley” (*tulyasauvīrāñjana*) (**Su 1938**: 628).

541 The ablative “from collyrium” is hard to construe, but Ḍalhaṇa used this term and phrase in his commentary on 6.17.41ab (**Su 1938**: 629).

542 Probably *Soymida febrifuga* A. Juss.

543 Ḍalhaṇa invoked a general rule (*paribhāṣā*) to indicate that this mixture should be cooked with sesame oil.

544 These are fig trees. The *Sauśrutaniḡhaṇṭu* (252) specifies the Uḍumbara. Cf. the classification in CS.1.1.71–72, 1.8, *et passim*.

545 On this term, see SS.1.35.42 (**Su 1938**: 157) and the discussion by **zimm-1999**.

546 Ḍalhaṇa glossed treatment (*kriyā*) specifically as inspissation (*rasakriyā*) (**Su 1938**: 629).

treacle and dried ginger is good.<sup>547</sup>

- 41 Alternatively, a collyrium (*añjana*) that has been prepared many times in the eight types of urine<sup>548</sup> is put into water with the three fruits. Having stored it in the mouth of a nocturnal creature (*niśācara*)<sup>549</sup> one should place it in a conch (*salilotthita*) for two months.<sup>550</sup>
- 42 One should apply that collyrium (*añjana*) together with the flowers of mahua (*madhūka*) and horseradish tree (*śigru*) when [the disease] is caused by all [the humours].  
But alternatively, all treatments apply when blood is the cause. The procedure that removes bile is good when there is blue dot cataract (*mlāyin*).<sup>551</sup>
- 43 For one who has a humour, the physician should consider the rule in all humoral cases and then smear the ointment on the face.<sup>552</sup>  
The treatment that is good for removing watery eye (*syanda*) should be properly applied in all these humoral cases, according to the individual.<sup>553</sup>
- 44 The physician should not employ substances in errhines etc., when the humours intensify, and also when disease spreads. And further, in the *Kalpa*, there is a good deal more said about collyriums, and that should be considered and then applied.<sup>554</sup>
- 45 Someone who uses matured ghee, the three fruits, wild asparagus, as well as mung beans, emblic and barley has nothing to fear from cases of severe blindness (*timira*).
- 46 Blindness is dispelled by milk prepared with wild asparagus or in emblics, or again cooked barley (*yavaudana*) followed by the water of three

547 We emend हिते to हितम्, against the MSS.

548 See *Suśrutasaṃhitā* mūtravarga

549 Ḍalhaṇa glossed nocturnal creature (*niśācara*) as “vulture,” although elsewhere in the *Suśrutasaṃhitā* it is more commonly interpreted as a spirit or demon. In the present context, following verses 33 and 34, it is probably a snake.

550 We interpret “water-born (*salilotthita*)” as “conch” in line with *jalodbhava*, but the term is uncertain.

551 The vulgate follows Ḍalhaṇa in glossing *mlāyin* as *parimlāya*. The description of this condition at SS.6.7.27–28 appears to refer to “blue dot” or “cerulean” cataract. √*mlai* derivatives can mean “dark” or “black.”), which is normally a different ailment.

552 The vulgate edition omits part of this verse (ab) combining earlier and later passages.

553 The term watery eye (*syanda*) refers to the specific disease *abhiśyanda*. See SS.6.6.5, 1.46.51, etc.

554 Ḍalhaṇa noted that *Kalpa* means the Uttaratantra adhyāya 18 (Su 1938: 633 ff).

find ref.

Check out  
these refs.

meaning of  
kalpa



- fruits with plenty of ghee.
- 47 When there is bloodshot blindness (*rāgiṇi timire*), the wise physician should not cut a vein. A humour injured (*utpīḍita*) by the instrument rapidly destroys vision.
- 48 Non-bloodshot blindness (*araga timira*) in the first layer (*paṭala*) is treatable. And bloodshot blindness (*rāgiṇi timire*) in the second layer, with difficulty. And in the third layer it can be mitigated (*yāpya*).<sup>555</sup>
- 49 I shall explain the therapy for success when there is a cataract (*liṅganāśa*) caused by phlegm. It may be white, like a full moon, an umbrella, a pearl (*muktā*) or a spiral (*āvarta*).
- 50 Or it may be uneven, thin in the middle, streaked or have excessive shine (*prabha*). A humour (*doṣa*) in the pupil may be characterized as being painful or having blood.<sup>556</sup>
- 51–52 At a time that is neither too hot or too cold, the patient who has been oiled and sweated is restrained and seated, looking symmetrically at his own nose.
- The wise physician should separate (*muktvā*) two white sections from the black part (*kṛṣṇa*) and from the outer corner of the eye (*apāṅga*). Then he should press (*pīḍ-*) properly into the eye,<sup>557</sup> at the naturally-occurring (*daivakṛte*) opening (*chidra*) with a probe (*śalākā*) made of copper or iron, with a tip like a barley-corn, held by a steady hand with the middle finger, forefinger and thumb, the left one with the right hand and the other one contrariwise.
- When the piercing is done properly, there is the issue of a drop of liquid and a sound.<sup>558</sup>
- 55 The expert should moisten the exact place of piercing with a woman's breast-milk. Then he should scratch the circuit of the pupil

555 Although the text says with difficulty (*kṛcchra*), the implication is that it is untreatable (*asādhya*) (cf. 6.17.2 (Su 1938: 625) above). The three categories, treatable, untreatable and possibly mitigated are standard categories of triage.

556 In the vulgate, and in parallel passages in the AS, the reading “it may be (*bhavet*)” is replaced with the negative “if, then not (*na ced*)” (cf. utt.17.1–3a (As 1980: 712)). These characteristics are then read as conditions that preclude surgery; for the Nepalese recension, they are simply descriptions of the appearance of a cataract.

557 We understand the locative *nayane* as the place of pressing; other interpreters take it as an accusative dual. The idea is that the eye is held steady by the surgeon.

558 Ḍalhaṇa remarked on 6.17.61ab (Su 1938: 630) that when the piercing is not correctly done, blood issues and there is no sound.

- (*dr̥ṣṭimaṇḍala*) with the tip of the probe (*śalākā*).<sup>559</sup>
- 56 Without injuring, gently pushing the phlegm in the circuit of the pupil against the nose, he should remove it by means of sniffing (*ucchiṅgana*).<sup>560</sup>
- 57 Whether the humour is solid (*styāna*) or liquid (*cala*), one should apply sweating to the eye externally, with leaves (*bhaṅga*) that remove wind, after fixing the needle (*sūcī*) properly.<sup>561</sup>
- 58 But if the humour cannot be destroyed or if it comes back, one should apply the piercing (*vyadha*) once again, with appropriate oils and so on.
- 59 Now the pupil (*dr̥ṣṭi*) shines like the sun (*hari*) in a cloudless sky; then, when objects become visible, one may slowly remove the probe (*śalākā*).<sup>562</sup>
- 60 Having smeared ghee on the eye, one should cover it with a bandage. Then, he must lie down supine in a house free from disturbances.<sup>563</sup>
- 61 At that time, he should not belch, cough, sneeze, spit or shiver. Afterwards there should be restrictions (*yantraṇā*) as in the case of someone who has drunk oil.<sup>564</sup>
- 62 Every three days one should wash it with decoctions (*kaṣāya*) that remove wind. After three days, one should sweat the eye externally because of the danger of wind.
- 63 Having restrained himself in this way for ten days he should thereafter take a beneficial regimen (*karma*) that clears the pupil (*dr̥ṣṭi*) and also

559 The anatomy of the eye is described in 6.1.14–16 (Su 1938: 596). The disks or *maṇḍalas* are the circuits or disks of the eye.

560 Ḍalhaṇa described sniffing (*ucchiṅgana*) at 6.19.8 (Su 1938: 641), clearly intending inward sniffing.

561 We interpret *bhaṅga* as leaves, following the usage elsewhere in this sthāna 4.32.9, 6.11.5 (Su 1938: 513, 614) where *bhaṅga* means shoots (*pallava*). A similar procedure is described at 6.17.25a (As 1980: 716a), where sweating of the eye is done by means of the leaves of a castor-oil plant.

562 There are many problems with the MS readings and interpretation of this half-verse. We have inferred “sky” and emended from “free from the point (*agramukta*)” to “free from clouds (*abhramukta*)”. The latter meaning is supported (in different words) by the vulgate and occurs elsewhere in Sanskrit literature.

563 Ḍalhaṇa explained disturbances specifically as dust, smoke, drafts and sunlight 6.17.67 (Su 1938: 631a).

564 Ḍalhaṇa glossed “restrictions (*yantraṇā*)” as having a controlled diet and the other restrictions appropriate to someone who is taking oil as a preparation before further therapy (6.17.68 (Su 1938: 631)). These restrictions are also described at 6.18.28 (Su 1938: 635) and 1.16.25cd (Ah 1939: 249).



he should take light food in measure.

### [Complications]

- 64 When there is a misshapen eyeball (*vilocana*), the eye may fill because of the release of blood from a vein.<sup>565</sup>  
 A hard probe leads to shooting pain (*śūla*), a thin to unsteadiness of the humours (*doṣapariplava*),<sup>566</sup>  
 65 a thick-tipped probe leads to a large wound, and a sharp one may cause harm in many ways; a very irregular one may cause a discharge of water, a rigid (*sthirā*) one brings about a loss of function (*kriyāsaṅga*).<sup>567</sup>  
 66 Therefore, one should make a good probe that is free from these defects.

### [Characteristics of the probe]

The probe should be eight finger-breadths long and in the middle it is wrapped with thread and is as thick as a thumb joint. It is shaped like a bud at both ends (*vaktra*).

- 67 A commendable probe should be made of silver, iron or gold (*śātakumbhī*).<sup>568</sup>

### [Complications]

Redness, swelling, lumps, driness (*coṣa*), bubbling (*budbuda*),<sup>569</sup> pigs' eye (*sūkarākṣitā*),<sup>570</sup> irritation (*adhimantha*), etc. and other diseases arise from faults in the piercing,

<sup>565</sup> The condition of "misshapen eye" is referred to briefly in 6.61.9 (Su 1938: 800), where Ḍalhaṇa glossed it as "bent brow and eye (*vakrabhrūnetra*). The vulgate's reading of "with blood (*śonitena*)" is easier to construe.

<sup>566</sup> There is a medically significant difference here from the vulgate, which reads "a rough (*khara*) probe" not a "thin" probe.

<sup>567</sup> This translation of loss of function (*kriyāsaṅga*) is given on the basis of Ḍalhaṇa's gloss of *kriyāsaṅgakarīn* at 3.8.19 (Su 1938: 382) as "causing the destruction of actions such as moving (*gamanādikriyāvīnāśakarī*)."

<sup>568</sup> The vulgate reads "copper (*tāmra*)" in place of "silver."

<sup>569</sup> Ḍalhaṇa glossed "bubbling (*budbuda*)" as "prolapse (*māṃsanirgama*) that looks like bubbles."

<sup>570</sup> The expression "pigs' eye" appears to be a *hapax*. It was glossed as "downward vision (*adhodṛṣṭitva*)" by Ḍalhaṇa.

- 69–70 or even from bad behaviour. One should treat them each accordingly. Listen to me once again about compounds for painful red eyes. Red chalk (*gairikah*), Indian sarsaparilla (*śārivā*), panic grass (*dūrvā*), and ghee ground with barley.
- 71 This face ointment is to be used for quelling pain and redness. Or else it may be taken combined with the juice of citron (*mātuluṅga*) with sesame gently fried, mixed with white mustard (*siddhārthaka*).<sup>571</sup> This is immediately beneficial when someone is looking for relief.
- 72 A paste with Holostemma (*payasyā*),<sup>572</sup> Indian sarsaparilla (*śārivā*), cassia cinnamon (*patra*), Indian madder (*mañjiṣṭhā*), and liquorice (*madhukair*) stirred with goat's milk, pleasantly warmed, is said to be healthy.<sup>573</sup>
- 73 Alternatively, it can be made in this way with Himalayan cedar, Himalayan cherry (*padmaka*) and dried ginger. Or, in the same way, with grapes, liquorice and the Lodh tree mixed with Sindh salt.
- 74 Alternatively, goats' milk with the Lodh tree, Sindh salt, red grapes and liquorice, cooked, should be used in irrigation because it removes pain and redness.
- 75 Having cooked it with liquorice, water-lily, and costus, mixed with grapes (*drākṣā*), lac (*lākṣā*), white sugar (*sitā*), with wild asparagus, Hare Foot Uraria (*prthakparṇī*),<sup>574</sup> nutgrass (*mustā*), liquorice, Himalayan cherry (*padmaka*), and Sindh salts, one should apply it [irrigation] gently warm.
- 76cd–77ab Ghee that has been cooked in four times the amount of milk that has itself been cooked with drugs that destroy wind.<sup>575</sup> This has an admixture of cottony jujube (*kākolī*) etc., should be prescribed in all treat-

571 On the adverbial use of gently (*mṛdu*), see **gomb-1979**.

572 The identity of *payasyā* is debated (**gvdb**), and was already in doubt at the time of Ḍalhaṇa but likely candidates may be those suggested by Ḍalhaṇa, who suggests either *arkapuṣpī* or *kṣīrakākolī*, that may be *Holostemma adakodien* Schult. and *Leptadenia reticulata* (Retz.) Wight & Arn. (**adps**). The *Sauśrutanighaṇṭu* glosses it as *kṣīrikā* or *arkapuṣpikā* (**suve-2000**).

573 The expression “stirred with goat's milk (*ajākṣīrārdita*)” is difficult. It may be connected with the rare root *ard* documented by **whit-root**. Cf. *√ard gatau* (*Dhātupāṭha* 1.56).

574 **suve-2000**.

575 Ḍalhaṇa mentioned that these drugs include Deodar (*bhadradāru*) and other wind-destroying drugs. The *vātaśaṃśamana* group is listed in *Suśrutasaṃhitā sūtrasthāna* 1.39.7.

ments.<sup>576</sup>

- 77cd–78ab If pain does not end in this way, one should administer blood-letting to the vein of someone who has previously been oiled and sweated. Then the wise physician should apply cauterization in the advised manner.<sup>577</sup>
- 78cd–80ab Now listen to two excellent collyriums for making the pupils clear. After grinding the flowers of perploca of the woods (*meṣaśṛṅga*), siris (*śirīṣa*), axelwood (*dhava*) royal jasmine (*jātī*), pearl and beryl (*vaiḍūrya*) with goat's milk, one should put it in a copper pot for seven days.
- 80cd–81 Having made it into wicks (*vartti*), the physician should apply it as a collyrium (*añjana*). Alternatively, one should make kohl (*srotoja*), coral (*vidruma*), cuttlefish bone (*phena*), and realgar (*manaḥśilā*) and peppers into wicks as before. One should apply these wicks, which are good in a collyrium, to steady the pupil.
- 82 I shall again discuss the foremost collyriums at length in the *Kriyākālpa* section. Those various methods may be applied here too.

or a dual?

<sup>576</sup> Ḍalhaṇa noted that this would include errhines, ointments, etc.

<sup>577</sup> The vulgate reads *vāpi* for *cāpi*, so Ḍalhaṇa saw blood-letting and cautery as alternatives, not a sequence of treatments. Ḍalhaṇa listed the places that cauterization may be applied, such as the brow, forehead, etc.



# Uttaratantra 38: Diseases of the Female Reproductive System

## Introduction

The chapter talks about various diseases of the female reproductive system and, in doing so, combines both aspects that go into a representation of diseases in āyurvedic literature: signs, symptoms and pathogenesis (*nīdāna*), on the one hand, and medical treatment (*cikitsā*), on the other. In chapters of the *Uttaratantra*, these two aspects are sometime dealt with in two different chapters *X-vijñānīya* and *X-pratiṣedha*. There are, however, many examples where this distinction is not made.

## Literature

The chapter is summarized, with notes on vocabulary and references to further research literature, in [HIML](#): IA, 313. ([tīva-1990](#)) dedicated a monograph to this topic, and [selb-2005](#); [selb-2005b](#) has explored gynecological narratives in ayurveda.

## Placement of the Chapter

In the vulgate text ([Su 1938](#)) the current chapter, 6.38, is found after the *Uttaratantra*'s subsection on paediatrics, the *Kumāratantra*, see Table 3.<sup>578</sup> But in the Nepalese version, this is chapter 6.58 of the *Uttaratantra*. And it is also counted as chapter 23 of the subsection *Kāyācikitsā*.

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<sup>578</sup> Or *Kumārabhṛtya* as this section is named in MS Kathmandu KL 699.

Table 3: Subdivisions of the Uttaratantra, in the vulgate.

Section	Chapters	Internal count
Śālakyatantra	1–26	1–26
Kumāratantra	27–38	1–12
Kāyacikitsātantra	39–59	1–21
Bhūtavidyātantra	60–62	1–3
Tantrabhūṣaṇādhyāya	63–66	1–4

Several things are noteworthy in this regard:

- In the placement of the vulgate, this chapter follows upon 6.37 *Grahotpatti* (6.35 in the Nepalese version), a chapter that talks about the origination of nine demons (*graha*) that are responsible for all children's diseases described in previous chapters of the *Kumāratantra*. In this way, the current chapter retains the general focus on the child bearing (*kaumārabhṛtya*), but, at the same time, marks a change to a distinct, less mystical approach to the topic at hand (that could originate in a cultural milieu different from that of the preceding eleven chapters). Ḍalhana explained how the chapter fits its context in the following way:

It is appropriate that, for the sake of treating the disorders of the female reproductive system, the chapter called “Countermeasures Against Disorders of the Female Reproductive System” is taught immediately after the chapter called “The Origination of Demons (*graha*).” It is because (1) there is an explicit mention of the word “*yonī*” in the statement “born in the womb (*yonī*) of animal and human” [in 6.37.13bc (Su 1938: 667)] and because (2) the disorders of the female reproductive system are the causes for the inborn disorders of children.<sup>579</sup>

- In the placement of the Nepalese version,
  - 6.*Yonivyāpatpratiṣedha* is preceded by

<sup>579</sup> Ḍalhana on 6.38.1 (Su 1938: 668): ग्रहोत्पत्त्यध्यायानन्तरं ‘तिर्यग्योनिं मानुषं च’ इति वचनेन योने-  
र्नामसंकीर्तनात् कुमारजन्मविकारकारणत्वाच्च योनेर्व्यापञ्चिकित्सितार्थं योनिव्यापत्प्रतिषेधाध्यायारम्भो यु-  
ज्यत [...].

- 6.56 *Mūtrāghātapratiṣedha* (6.58 in [Su 1938](#)) and
- 6.57 *Mūtrakṛcchrāpratiṣedha* (6.59 in [Su 1938](#)), two chapters dealing with the diseases of the urinary tract.

The current chapter carries on with the topic of diseases that affect genitalia. In its Nepalese version, the chapter opens with two verses that explain the reasons for treating the particular set of diseases. These lack any reference to the inborn disorders of children, mentioned by Ḍalhaṇa, and instead highlight the importance of curing female diseases for the satisfaction of male partner.

- SS.1.3 in both [Su 1938](#) and the Nepalese version lists the chapter at the place where it is found in the vulgate.<sup>580</sup>
- Parallel chapters in the *Aṣṭāṅgasamgraha* and the *Aṣṭāṅgahṛdayasamhitā* form a part of the *Śalyatantra* section of each text.

## Parallels

The current chapter is parallel in its content to *Aṣṭāṅgasamgraha* 6.38 and 6.39 as well as *Aṣṭāṅgahṛdayasamhitā* 6.33 and 6.34 (*Guhyarogavijñāna* and *Guhyarogapratiṣedha* respectively).

A close literary parallel to the first part of the chapter is found in *Mādhavanidāna* (**madhava**) 62, or at least its version printed in **madhava**. The readings of the **madhava** as it stands now usually side with the vulgate version rather than with the Nepalese. In addition to the basic text, there are several valuable pointers made in the *Madhukośa*, an early commentary on the **madhava**. This part of the text is authored by Śrīkaṇṭhadatta, who was most like a direct student of Vijarakṣita. The latter wrote the first part of the *Madhukośa*, up to chapter 32, and, what is more, can be dated to the late eleventh or early twelfth centuries.<sup>581</sup>

Another most interesting parallel is found in *Carakasamhitā* 6(Ci).30.

<sup>580</sup> See 1.3.37ab ([Su 1938](#): 15): नैगमेषचिकित्सा च ग्रहोत्पत्तिः सयोनिजा ॥.

<sup>581</sup> **meul-1974**.

## Philological notes

### Metrical alterations

The first two verses in the Nepalese version, 6.38.2.1 and 6.38.4.1, are written in a classical variety of the *upajāti* metre:  $\underline{\text{U}} \text{ } \underline{\text{U}} \text{ } \underline{\text{U}} \text{ } \underline{\text{U}} \text{ } \underline{\text{U}} \text{ } \underline{\text{U}} \text{ } \underline{\text{U}}$ . In content, they are only approximately parallel to three hemistichs in *anuṣṭubh* metre found in the vulgate.<sup>582</sup> The latter verses lack the apologetic explanation concerning the reasons for this chapter being taught.

### The original opening verses

From verse *Suśrutasamhitā* 6.38.5.1 onwards, the Nepalese version of the text continues with three hemistichs in the same classical *upajāti* metre (the syllabic pattern above).<sup>583</sup> By contrast, the vulgate contains two complete verses (four hemistichs) in the *anuṣṭubh* metre, again with only loosely-related content.<sup>584</sup> The three final hemistichs of this group are borrowed verbatim from the *Carakasamhitā*.<sup>585</sup> We can be sure of the direction of borrowing because one of these shared verses says that the twenty kinds of diseases of the female reproductive system “have already been indicated in the *Compendium of Diseases* (rogasamgraha)”.<sup>586</sup> This statement does not make any sense in the context of the *Suśrutasamhitā*, where no such Compendium exists.<sup>587</sup> By contrast, in the *Carakasamhitā* this reference points back to chapter 1.19 (*Ca* 1941: 109–112), which calls itself “The Compendium of Diseases”.<sup>588</sup> This Compendium lists all the diseases dealt with in later sections of the text, and specifically mentions the twenty diseases of female reproductive system.<sup>589</sup> Even the vocabulary and wording of this

<sup>582</sup> *Suśrutasamhitā* 6.38.3–4ab (*Su* 1938: 668).

<sup>583</sup> The metre of these verses is not perfect.

<sup>584</sup> *Suśrutasamhitā* 6.38.4cd–6ab (*Su* 1938: 668).

<sup>585</sup> *Carakasamhitā* 6.30.7cd–8 (*Ca* 1941: 634).

<sup>586</sup> *Suśrutasamhitā* 6.38.5ab (*Su* 1938: 668): विंशतिर्व्यापदो योनेर्निर्दिष्टा रोगसंग्रहे ॥ ← *Carakasamhitā* 6.30.7cd (*Ca* 1941: 634).

<sup>587</sup> The remark was not commented on by Ḍalhana.

<sup>588</sup> *Carakasamhitā* 1.19.9cd (*Ca* 1941: 112): रोगाध्याये प्रकाशिताः.

<sup>589</sup> *Carakasamhitā* 1.19.3 (*Ca* 1941: 110): विंशतिर्योनिव्यापदः ।



passage is identical to the later verses. It is beyond doubt that this passage originated in the *Carakasamhitā* and was borrowed by the editors of the vulgate text of the *Suśrutasamhitā*.<sup>590</sup>

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<sup>590</sup> The above three hemistichs in *anuṣṭubh* are also repeated in the **madhava** 62.1–2ab. Given that the subsequent verses in the **madhava** stem from the *Suśrutasamhitā*, it is likely that **madhava** 62.1–2ab too was borrowed from from the *Suśrutasamhitā* and not from its original location in the *Carakasamhitā*).

## Translation

- 1 And now I shall explain the countermeasures against disorders of the female reproductive system (*yonivyāpat*).<sup>591</sup>
- \*3 Since for good men, a woman is the most pleasurable thing, therefore a physician should diligently attend to the diseases located in the female reproductive system (*yonī*), because he is entirely devoted to it (that is, to curing these diseases) for the sake of (people's) happiness.<sup>592</sup>
- \*4 A corrupted female reproductive system (*yonī*) cannot consume semen (*bīja*), and therefore, the woman cannot take a fetus (that is, become pregnant). She gets severe prolapses (*arśas*), abdominal lump (*gulma*) and similarly many other diseases (*roga*).
- \*5 Humours (*doṣa*), wind (*vāta*), etc., corrupted due to faulty medical treatment (*mithyopacāra*),<sup>593</sup> sexual activity, fate, and also defects (*doṣa*) of menstrual blood (*ārtava*) and semen (*bīja*), produce various diseases in the female reproductive organ (*yonī*). These 20 diseases are taught here distinctly and one by one along with their treatment

591 On this broad understanding of the term *yonī* as “female reproductive system” see **das-2003**.

592 As our translation indicates, the sentence construction does not allow an unambiguous identification of who or what is the referent of the pronoun *tad* in the compound form *tadadhīna* ‘devoted to it.’ Our current understanding is that *tad* refers to the ‘most pleasurable thing’ mentioned in pāda a. It could, however, also refer to ‘them,’ that is, the ‘good men.’

593 In our translation of the compound मिथ्योपचार, we decided for the technical meaning of the term उपचार, that is, “medical application” or “treatment.” The combination मिथ्या+उप-√चर् is attested several times in medical literature. At least once, at *Carakasamhitā* 3.3.38 (**Ca 1941**: 245), it is given an explicit gloss by Cakrapāṇidatta: मिथ्योपचरितानिति असम्यक् चिकित्सितान् “... given improper therapy”. In the *Suśrutasaṃhitā* (**Su 1938**), it is used once in a passage (6.18.30 (**Su 1938**: 635)) where it refers specifically to the wrong application of irrigation (*tarpaṇa*) and roasting (*puṭapāka*), both of which are mentioned in the previous verse. Another use of the compound in a similar meaning is found in a citation from Bhoja’s work quoted by Gayadāsa at *Suśrutasaṃhitā* 2.5.17 (**Su 1938**: 287): श्वित्रं तु द्विविधं प्रोक्तं दोषजं व्रणजं तथा । तत्र मिथ्योपचाराद्धि व्रणस्य व्रणजं स्मृतम् ॥ “... arises from wrong treatment of the wound.” In contrast to this, the parallel verse in *Suśrutasaṃhitā* 6.38.5ab (**Su 1938**: 668) = *Carakasamhitā* 6.30.8 (**Ca 1941**: 634) = **madhava** 62.1 reads मिथ्याचार “wrong conduct.” All commentators (Cakrapāṇidatta on the *Carakasamhitā*, Śrīkaṇṭhadatta on the **madhava**, and Ḍalhaṇa on the *Suśrutasaṃhitā*) explain that the wrong conduct stands here specifically for unwholesome diet. The parallel in *Aṣṭāṅgahṛdayasaṃhitā* 6.33.27 (**Ah 1939**: 895) = *Aṣṭāṅgasāṅgraha* 6.38.34a (**As 1980**: 829) plainly reads दुष्टभोजन “corrupted food” instead.

(*bheṣaja*), causes (*hetu*) and signs (*cihna*).

\*6.1 Because of wind (*vāta*), female reproductive organ (*yonī*) becomes:

1. udāvartā (*udāvartā*),
2. called Infertile (*vandhyā*), and
3. Sprung (*plutā*),
4. Flooded (*pariplutā*), and
5. Windy (*vātalā*).

\*6.2 And because of choler (*pitta*), occur:

1. With bloodloss (*raktakṣayā*),
2. Vomiting (*vāminī*), and
3. Causing a Fall (*sraṃsanī*),
4. Child-murderess (*putraghnī*), and also
5. Bilious / Choleric (*pittalā*).

\*7.1 And because of phlegm (*kapha*) occur:

1. Extremely Excited (*atyānandā*),
2. Protuberant (*karṇinī*), and
3. & 4. two Caraṇī (*caraṇī*), and
5. other Phlegmatic (*śleṣmalā*).

\*7.2 And similarly there are other (kinds of morbid female reproductive system) involving all *doṣas*:

1. Impotent (*śaṇḍhī*),
2. With testicles (*aṇḍīnī*),
3. two Huge (*mahatī*),
4. With a needle-like opening (*sūcīvākrā*),
5. Sarvātmikā (*sarvātmikā*).

# Uttaratantra 65: Rules of Interpretation

## Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.<sup>588</sup> Other explorations of this topic include Nārāyaṇa 1949; Dasgupta 1952; Oberhammer 1968; TYV; Lele 1981; Scharfe 1993; Mejer 2000; Singh 2003.

Frauwallner 1958 discussed the influence of the *tantrayuktis* in the Sāṅkhya tradition. Preisendanz (2013: 105–106, fn. 109) provided further references to the discussion of *yukti* in Buddhist literatures. Manevskaia (2008) gave examples of the use of *tantrayuktis* in Buddhist commentarial literature. Chevillard (2009) discusses the translation of the *tantrayuktis* in Tamil literary tradition, with a specific focus on *Tolkāppiyam* and its commentaries.

## Early Sources

An ancient tradition of enumerating the *tantrayuktis* served as a foundational source not only for medical texts but also for works in various other disciplines, including Arthaśāstra, philosophy, and even grammar. The *Suśrutasamhitā* stands as the earliest Āyurvedic text that presents a compilation of a list of *tantrayuktis* followed by their definitions and usage. Mentions to *Tantrayuktis* are also found in the *Carakasamhitā* 8.12 (Ca 1941) which introduce four additional *tantrayuktis*. However, the *tantrayuktis* remain undefined in the *Carakasamhitā*.

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<sup>588</sup> [HIML](#): IA, 331.

## The *Arthaśāstra*

The enumeration and definitions of the *tantrayuktis* in the *Suśrutasamhitā* closely parallel their treatment in the *Arthaśāstra*. *Tantrayuktis* are discussed in the fifteenth and final chapter of the *Arthaśāstra*, called the *Tantrayukti*.<sup>589</sup> For a side-by-side comparison of the *tantrayuktis* in the *Suśrutasamhitā* and the *Arthaśāstra*, please refer to Table 4.

## The *Yuktidīpikā*

*Yuktidīpikā* (circa late sixth to early eighth century), an anonymous commentary on Īśvarakṛṣṇa's *Sāṅkhyakārikā*, initiates its discourse with a detailed discussion of the characteristics of a scientific treatise, some of which align with the *tantrayuktis*.<sup>590</sup> In the *Yuktidīpikā*, these terms are referred to as *tantraguṇa* or *tantrasampat*. They are: (1) *sūtropapatti* (2) *pramāṇopapatti* (3) *avayavopapatti* (4) *anyūnatā* (5) *saṁśayokti* (6) *nirṇayokti* (7) *uddeśa* (8) *nirdeśa* (9) *anukrama* (10) *saṁjñā* and (11) *upadeśa*.<sup>591</sup> Apart from these, the *Yuktidīpikā* also exemplifies (12) *utsarga* (general rule), (13) *apavāda* (exception), and (14) *atideśa* (extended application). However, *utsarga* and *apavāda* are not considered *tantrayuktis* in other comprehensive lists. The *Yuktidīpikā* further states that while other *tantrayuktis* can be demonstrated in a similar manner, since they are peripheral topics, the text does not delve into their discussion.<sup>592</sup>

## Tamil literature

Discussions on the *tantrayuktis* are also found in Tamil technical literature, the earliest of which is the *Tolkāppiyam*.<sup>593</sup> A list of 32 *tantrayuktis*, called

589 *Arthaśāstra*: 280–283

590 See Oberhammer 1968: 605–614 for a detailed discussion of the use of the *tantrayuktis* in the *Yuktidīpikā*.

591 सूत्रप्रमाणावयवोपपत्तिरन्यूनता संशयनिर्णयोक्तिः ।  
उद्देशनिर्देशमनुक्रमश्च संज्ञोपदेशाविह तन्त्रसम्पत् ॥

*Yuktidīpikā*: 3

592 एवम्प्रकारा अन्येऽपि द्रष्टव्याह । तद्यथोत्सर्गोऽपवादोऽतिदेश इत्यादि ।...इत्येवमन्या अपि तन्त्रयुक्तयः शक्या इह प्रदर्शयितुम् । अतिप्रसङ्गस्तु प्रकृतं तिरोदधातीति निवर्त्यते । सिद्धं तन्त्रयुक्तीनां सम्बन्धोपपत्तेस्तन्त्रम् इदम् इति । *Yuktidīpikā*: 8

593 For a detailed discussion of the treatment of the *tantrayuktis* in the *Tolkāppiyam* see Chevillard 2009.

*utti* or *tantiravutti* in Tamil, are given in the 27<sup>th</sup> (the final) chapter titled *Marapiyal* “Chapter on conventions” of the last book called *Poruḷ* “Matters” of the *Tolkāppiyam*. There is no consensus regarding the dating of the *Tolkāppiyam*. However, if we endorse Zvelebil’s view, which posits that the final redaction of the *Tolkāppiyam* occurred around the fifth century AD, it follows that this section of the *Tolkāppiyam* cannot postdate the fifth century. If we follow the dating of Zvelebil, we can safely argue that by that time, Sanskrit *tantrayuktis* had already been translated into Tamil. Nevertheless, determining the correspondence between specific *tantrayuktis* and Tamil *uttis* poses a challenge. A major factor contributing to this challenge is the disagreement between two commentators of the *Tolkāppiyam*, namely Ḹampūraṇar (11th or 12th century) and Pērācīriyar (possibly 13th century), regarding the interpretation of the list of *uttis*. It is still not clear which list of 32 *tantrayuktis* was before the author of the *Tolkāppiyam*.

After the *Tolkāppiyam*, several other Tamil texts refer to the *tantrayuktis*. Among them the *Yāpparuṅkalam* (possibly 10th century), the *Vīracolīyam* (11th century), *Naṇṇūl* (late 12th or early 13th century), and their commentaries hold significant importance in this context.

### The Viṣṇudharmottarapurāṇa

The third book of the *Viṣṇudharmattarapurāṇa*, believed to have been composed between the fifth and seventh centuries, includes a chapter dedicated to the *tantrayuktis*.<sup>594</sup> Unlike the *Arthaśāstra* and the *Suśrutasamhitā*, this chapter lacks illustrative examples of the *tantrayuktis*. The chapter lists 32 *tantrayuktis* followed by definitions. Notably, the list and definitions given here – we are using the critical edition by Priyabala Shah – in most cases bear a striking resemblance to those found in the *Suśrutasamhitā*. Given the striking alignment between the list and definitions of *tantrayuktis*, one could suggest that the *Viṣṇudharmottarapurāṇa*’s chapter on *tantrayuktis* likely draws directly or indirectly from the *Suśrutasamhitā* or from a common source. The designations and the order of the *tantrayuktis* in the *Viṣṇudharmottarapurāṇa* are almost identical. The only differences in the order are as follows:

1. *Viparyaya* is placed after *vidhāna* whereas in the *Suśrutasamhitā* it follows *arthāpatti*.

<sup>594</sup> Adhyāya 6, *Viṣṇudh* 3: 13–14.

2. *Anumata* is placed after *vyākhyāna* whereas in the *Suśrutasamhitā* it follows *niṣṇaya*.
3. *Anāgatāvekṣaṇa* (*anāgatāpekṣaṇa* in the Nepalese version) occurs after *atīkrāntāvekṣaṇa* (*atīkrāntāpekṣaṇa* in the Nepalese version) whereas the order is reverse in the *Suśrutasamhitā*.

For a side-by-side comparison of the *tantrayuktis* in the *Suśrutasamhitā* and the *Viṣṇudharmottarapurāṇa*, please refer to Table 4.

### The *Saddanīti*

A list of the 32 *tantrayuktis* accompanied by definitions also appear in the final chapter (*Pariccheda* 28) of the final book (book 3: *Suttamālā*) of the renowned Pali grammar *Saddanīti* composed by Aggavaṃsa in Arimaddanapura (modern Bagan, Burma) in the twelfth-century.<sup>595</sup> Just as the *Viṣṇudharmottarapurāṇa*, this list also does not provide examples of the *tantrayuktis*. Although written in Pali, the order and the definition of the *tantrayuktis* (*tantiyutti* in Pali) closely resemble those of the *Suśrutasamhitā*. There are, however, a few differences:

1. The *tantrayukti pradeśa* is referred to as *paṭidesa* (Sanskrit *pratideśa*) and is positioned after *atidesa* (Sanskrit *atideśa*) whereas in the *Suśrutasamhitā* it follows *apadeśa*.
2. *Atīkrāntāpekṣaṇa* is designated as *atītāpekṣhana* (Sanskrit *atītāpekṣaṇa*).
3. *Svasaṃjñā* is designated as *anaññā sakasaṃjñā* (Sanskrit *ananyā svasaṃjñā*) and is defined with subtle variations.
4. *Ūhya* is designated as *upānīya*.

For a side-by-side comparison of the *tantrayuktis* in the *Suśruta Samhitā* and the *Saddanīti*, please refer to Table 4.

<sup>595</sup> *Saddanīti* 3: 920–921.

Table 4: Tantrayuktis in *Suśrutasamhitā* (S), *Viṣṇu-dharmottarapurāṇa* (V), *Arthaśāstra* (A), and *Saddanīti* (N)

Sequence	Terms	Definitions
(S) 1.	<i>adhikaraṇa</i>	तत्र यमर्थमधिकृत्योच्यते तदधिकरणम् ।
(V) 1.	<i>adhikaraṇa</i>	तत्र यमर्थमधिकृत्योच्यते तदधिकरणम् ।
(A) 1.	<i>adhikaraṇa</i>	यमर्थमधिकृत्योच्यते तदधिकरणम् ।
(N) 1.	<i>adhikaraṇa</i>	तत्थ यं अधिकिञ्च वुञ्चति, तं अधिकरणम् ।
(S) 2.	<i>yoga</i>	येन वाक्यं युज्यते स योगः । यथा व्यत्यासेनोक्तानां सन्निकृष्टविप्रकृष्टानां पदार्थानाम् एकीकरणम् ।
(V) 2.	<i>yoga</i>	येन वाक्यार्थो युज्यते स योगः ।
(A) 3.	<i>yoga</i>	वाक्ययोजना योगः ।
(N) 2.	<i>yoga</i>	पुब्बापरवसेन वुत्तानं सन्निहितासन्निहितानं पदानं एकीकरणं योगोः ।
(S) 3.	<i>padārtha</i>	योऽर्थोऽभिहितः सूत्रे पदे वा स पदार्थः । पदस्य पदयोः पदानां वा योऽर्थः स पदार्थः । अपरिमिताश्च पदार्थाः ।
(V) 3.	<i>padārtha</i>	योऽर्थो विधिकृतः सूत्रपदे स पदार्थः ।
(A) 4.	<i>padārtha</i>	पदावधिकः पदार्थः ।
(N) 3.	<i>padattha</i>	सुत्तपदेसु पुब्बापरयोगतो यो अत्यो विहितो, सो पदत्यो ।
(S) 4.	<i>hetvartha</i>	यदुक्तं साधनं भवति स हेत्वर्थः ।
(V) 4.	<i>hetvartha</i>	यदन्यद्युक्तिमदर्थस्य साधनं स हेत्वर्थः ।
(A) 5.	<i>hetvartha</i>	हेतुरर्थसाधको हेत्वर्थः ।
(N) 4.	<i>hetuattha</i>	यं वुत्तत्थसाधकं, सो हेतुअत्यो ।
(S) 5.	<i>uddeśa / samuddeśa</i>	समासवचनं समुद्देशः ।
(V) 5.	<i>uddeśa</i>	समासवचनमुद्देशः ।
(A) 6.	<i>uddeśa</i>	समासवाक्यमुद्देशः ।
(N) 5.	<i>uddesa</i>	समासवचनं उद्देशो ।
(S) 6.	<i>nirdeśa</i>	विस्तरवचनं निर्देशः ।
(V) 6.	<i>nirdeśa</i>	विस्तरवचनं निर्देशः ।
(A) 7.	<i>nirdeśa</i>	व्यासवाक्यं निर्देशः ।
(N) 6.	<i>niddesa</i>	वित्थारवचनं निद्देशो ।



Sequence	Terms	Definitions
(S) 7.	<i>upadeśa</i>	एवमित्युपदेशः ।
(V) 7.	<i>upadeśa</i>	एवमेवेत्युपदेशः ।
(A) 8.	<i>upadeśa</i>	एवं वर्तितव्यमित्युपदेशः ।
(N) 7.	<i>upadesa</i>	एवन् ति उपदेशो ।
(S) 8.	<i>apadeśa</i>	अनेन कारणेनेत्यपदेशः ।
(V) 8.	<i>apadeśa</i>	अनेन कारणेनेत्यपदेशः ।
(A) 9.	<i>apadeśa</i>	एवमसावाहेत्यपदेशः ।
(N) 8.	<i>apadesa</i>	अनेन कारणेना ति अपदेशो ।
(S) 9.	<i>pradeśa</i>	प्रकृतस्यातिक्रान्तेन साधनं प्रदेशः ।
(V) 9.	<i>pradeśa</i>	प्रकृतस्यानागतेन साधनं प्रदेशः ।
(A) 11.	<i>predeśa</i>	वक्तव्येन साधनं प्रदेशः ।
(N) 10.	<i>paṭidesa</i>	पकतस्स अनागतेन अत्यसाधनं पटिदेशो ।
(S) 10.	<i>atideśa</i>	प्रकृतस्यानागतेन साधनम् अतिदेशः ।
(V) 10.	<i>atideśa</i>	अतिक्रमणेन अतिदेशः ।
(A) 10.	<i>atideśa</i>	उक्तेन साधनमतिदेशः ।
(N) 9.	<i>atidesa</i>	पकतस्स अतिक्रान्तेन साधनं अतिदेशो ।
(S) 11.	<i>apavarga</i>	अभिप्रमृज्यापकर्षणमपवर्गः ।
(V) 11.	<i>apavarga</i>	अभिप्रायानुकर्षणमपवर्गः ।
(A) 22.	<i>apavarga</i>	अभिप्लुतव्यपकर्षणमपवर्गः ।
(N) 11.	<i>apavagga</i>	अतिव्यापेत्वा अपनयनं अपवर्गो ।
(S) 12.	<i>vākyaśeṣa</i>	येन पदेनानुक्तेन वाक्यं समाप्यते स वाक्य- शेषः ।
(V) 12.	<i>vākyaśeṣa</i>	येनार्थः परिसमाप्यते पदेनाहार्येण स वाक्य- शेषः ।
(A) 17.	<i>vākyaśeṣa</i>	येन वाक्यं समाप्यते स वाक्यशेषः ।
(N) 12.	<i>vākyadosa</i>	येन पदेन अवुक्तेन वाक्यपरिसमापनं भवति, सो वाक्यदोषो ।
(S)		
(V)		
(A) 12.	<i>upamāna</i>	दृष्टेनादृष्टस्य साधनमुपमानम् ।
(N)		
(S) 13.	<i>arthāpatti</i>	यदकीर्तितमर्थादापद्यते सार्थापत्तिः ।
(V) 13.	<i>arthāpatti</i>	यदकीर्तितमर्थादापद्यते सार्थापत्तिः ।

Sequence	Terms	Definitions
(A) 13.	<i>arthāpatti</i>	यदनुक्तमर्थादापद्यते सार्थापत्तिः ।
(N) 13.	<i>atthāpatti</i>	यद् अकित्तितं अत्थतो आपज्जति, सा अत्था- पत्ति ।
(S) 14.	<i>viparyaya</i>	यद्यस्य प्रातिलोम्यं तद्विपर्ययः ।
(V) 20.	<i>viparyaya</i>	तस्य प्रातिलोम्यं विपर्ययः ।
(A) 16.	<i>viparyaya</i>	प्रतिलोमेन साधनं विपर्ययः ।
(N) 14.	<i>vipariyaya</i>	यं यत्थ विहितं, तत्र यं तस्स पटिलोमं, सो वि- परिययो ।
(S) 15.	<i>prasaṅga</i>	प्रकरणान्तरेण समानः प्रसङ्गः ।
(V) 14.	<i>prasaṅga</i>	प्रकरणाभिहितोऽर्थः केनचिदुपोद्धातेन पुनरु- च्यमानः प्रसङ्गः ।
(A) 15.	<i>prasaṅga</i>	प्रकरणान्तरेण समानोऽर्थः प्रसङ्गः ।
(N) 15.	<i>pasaṅga</i>	पकरणन्तरेण समानो अत्थो पसङ्गो ।
(S) 16.	<i>ekānta</i>	यदवधारणेनोच्यते स एकान्तः ।
(V) 15.	<i>ekānta</i>	यथा तथा स एकान्तः ।
(A) 26.	<i>ekānta</i>	सर्वत्रायत्तमेकान्तः ।
(N) 16.	<i>ekānta</i>	सब्बथा यं तथा, सो एकान्तो ।
(S) 17.	<i>anekānta</i>	क्वचित्तथा क्वचिदन्यथा सोऽनेकान्तः ।
(V) 16.	<i>anekānta</i>	क्वचित्तथा क्वचिदन्यथाऽसावनेकान्तः ।
(A)		
(N) 17.	<i>anekānta</i>	यो पन कत्थचि अञ्जथा सो अनेकान्तो ।
(S) 18.	<i>pūrvapakṣa</i>	यस्तु निःसंशयमभिधीयते स पूर्वपक्षः । <sup>596</sup>
(V) 17.	<i>pūrvapakṣa</i>	प्रतिषेधवचनं पूर्वपक्षः ।
(A) 24.	<i>pūrvapakṣa</i>	प्रतिषेद्धव्यं वाक्यं पूर्वपक्षः ।
(N) 18.	<i>pubbapakṣa</i>	[यो] तु निस्सन्देहम् अभिधीयते, सो पुब्बप- क्खो ।
(S) 19.	<i>nirṇaya</i>	तस्योत्तरं निर्णयः ।
(V) 18.	<i>nirṇaya</i>	उत्तरवचनं निर्णयः ।
(A) 25.	<i>uttarapakṣa</i>	निर्णयवाक्यमुत्तरपक्षः ।
(N) 19.	<i>niṇṇaya</i>	तस्स यं उत्तरं, सो निण्णयो ।
(S) 20.	<i>anumata</i>	परमतमप्रतिषिद्धमनुमतम् ।

<sup>596</sup> This definition of *pūrvapakṣa* in the Nepalese version is problematic.

Sequence	Terms	Definitions
(V) 25.	<i>anumata</i>	परमतमप्रतिषिद्धमनुमतम् ।
(A) 18.	<i>anumata</i>	परवाक्यमप्रतिषिद्धमनुमतम् ।
(N) 20.	<i>anumata</i>	परमतम् अप्पटिसिद्धं अनुमतं ।
(S) 21.	<i>vidhāna</i>	प्रकरणानुपूर्व्यादभिहितं विधानम् ।
(V) 19.	<i>vidhāna</i>	प्रकरणानुपूर्वं विधानम् ।
(A) 2.	<i>vidhāna</i>	शास्त्रस्य प्रकरणानुपूर्वी विधानम् ।
(N) 21.	<i>vidhāna</i>	प्रकरणानुपुब्बं विधानं ।
(S) 22.	<i>anāgatāpekṣaṇa</i>	एवं वक्ष्यतीत्यनागतापेक्षणम् ।
(V) 22.	<i>anāgatāpekṣaṇa</i>	परत्र वक्षामीत्यनागतावेक्षणम् ।
(A) 27.	<i>anāgatāvekṣaṇa</i>	पश्चादेवं विहितमित्यनागतावेक्षणम् ।
(N) 22.	<i>anāgatāpekkhana</i>	एवं वक्खामि ति अनागतापेक्खनं ।
(S) 23.	<i>atīkrāntāpekṣaṇa</i>	इत्युक्तमित्यतिक्रान्तापेक्षणम् ।
(V) 21.	<i>atīkrāntāpekṣaṇa</i>	इत्युक्तमतिक्रान्तावेक्षणम् ।
(A) 28.	<i>atīkrāntāvekṣaṇa</i>	पुरस्तादेवं विहितमित्यतिक्रान्तावेक्षणम् ।
(N) 23.	<i>atītāpekkhana</i>	इति वुत्तन् ति अतीतापेक्खनं ।
(S) 24.	<i>saṃśaya</i>	उभयहेतुनिर्दर्शनं संशयः ।
(V) 23.	<i>saṃśaya</i>	उभयतो हेतुदर्शनं संशयः ।
(A) 14.	<i>saṃśaya</i>	उभयतो हेतुमानर्थः संशयः ।
(N) 24.	<i>saṃśaya</i>	उभयहेतुदस्सनं संसयो ।
(S) 25.	<i>vyākhyāna</i>	तत्रातिशयोपवर्णनं व्याख्यानम् ।
(V) 24.	<i>vyākhyāna</i>	तत्रातिशयवर्णनातिव्याख्यानम् ।
(A) 19.	<i>vyākhyāna</i>	अतिशयवर्णना व्याख्यानम् ।
(N) 25.	<i>vyākhyāna</i>	संवण्णना व्याख्यानम् ।
(S) 26.	<i>svasaṃjñā</i>	अन्यशास्त्रासामान्या स्वसंज्ञा ।
(V) 26.	<i>svasaṃjñā</i>	परैरसम्मतः शब्दः स्वसंज्ञा ।
(A) 23.	<i>svasaṃjñā</i>	परैरसमितः शब्दः स्वसंज्ञा ।
(N) 26.	<i>anaññā sakasaññā</i>	भूतानं पवत्ता आरम्भचिन्ता अनञ्जा, सस्स सा- धारणा सकसञ्जा ।
(S) 27.	<i>nirvācana</i>	लोकप्रथितमुदाहरणं निर्वचनम् ।
(V) 27.	<i>nirvācana</i>	लोके प्रतीतमुदाहरणं निर्वचनम् ।
(A) 20.	<i>nirvācana</i>	गुणतः शब्दनिष्पत्तिर्निर्वचनम् ।
(N) 27.	<i>nibbacana</i>	लोकप्पतीतम् उदाहरणं निब्बचनं ।

Sequence	Terms	Definitions
(S) 28.	<i>nidarśana</i>	दृष्टान्तव्यक्तिर्निदर्शनम् ।
(V) 28.	<i>nidarśana</i>	तद्युक्तिनिदर्शनं दृष्टान्तः ।
(A) 21.	<i>nidarśana</i>	दृष्टान्तो दृष्टान्तयुक्तो निदर्शनम् ।
(N) 28.	<i>nidassana</i>	दिट्ठन्तसंयोगो निदस्सनं ।
(S) 29.	<i>niyoga</i>	इदमेवेति नियोगः ।
(V) 29.	<i>niyoga</i>	एवेति नियोगः ।
(A) 29.	<i>niyoga</i>	एवं नान्यथेति नियोगः ।
(N) 29.	<i>niyoga</i>	इदम् एवा ति नियोगो ।
(S) 30.	<i>vikalpa</i>	।
(V) 30.	<i>vikalpa</i>	इदं वेदं वेति विकल्पः ।
(A) 30.	<i>vikalpa</i>	अनेन वानेन वेति विकल्पः ।
(N) 30.	<i>vikappa</i>	इदं वा ति विकप्पो ।
(S) 31.	<i>samuccaya</i>	।
(V) 31.	<i>samuccaya</i>	इदं चेदं चेति समुच्चयः ।
(A) 31.	<i>samuccaya</i>	अनेन चानेन चेति समुच्चयः ।
(N) 31.	<i>samuccaya</i>	संखेपवचनं समुच्चयो ।
(S) 32.	<i>ūhya</i>	यदनिर्दिष्टं बुद्धिगम्यं तदूह्यम् ।
(V) 32.	<i>ūhya</i>	अत्र यदनिर्दिष्टं युक्तिगम्यं तदूह्यम् ।
(A)	<i>ūhya</i>	अनुक्तकरणमूह्यम् ।
(N) 32.	<i>upānīya</i>	यद् अनिर्दिष्टं बुद्धिया अवगमनीयं, तद् उपानी- यन् ति ।

## Āyurvedic literature

### Primary texts

While references to *tantrayuktis* can be found across various disciplines, Āyurveda places a particular emphasis on their discussion, especially evident in key texts of Āyurveda, such as the *Caraka-* and the *Suśruta- saṃhitās*, as well as the *Aṣṭāṅgasan̄graha*. The *Carakasam̄hitā* and *Aṣṭāṅgasan̄graha* present an identical list of *tantrayuktis* contained in a stanza of four

*anuṣṭubh* verses.<sup>597</sup> However, unlike the *Suśrutasamhitā* they lack explicit definitions and examples. This list of the *tantrayuktis* appear in the final chapter of the last book in both *Carakasamhitā* (41b–45a, chapter 12, *Siddhisthāna*) and *Aṣṭāṅgasāṅgraha* (150–153, chapter 50, *Uttarasthāna*). The same has been quoted by Aruṇadatta in his commentary *Sarvāṅgasundarī* on the *Aṣṭāṅgaḥṛdaya* while elucidating the concept of *tantraguṇa* (qualities of the system).<sup>598</sup> Notably, this list consists of 36 *tantrayuktis* instead of 32 found in the *Suśrutasamhitā* and other texts. The additional four are: *prayojana* (objective), *pratyutsāra* (rebuttal), *uddhāra*, and *sambhava* (origin).

The presence of identical verses enumerating the *tantrayuktis* in the *Aṣṭāṅgaḥṛdayasamhitā*, *Carakasamhitā* and *Sarvāṅgasundarī* strongly suggests a shared origin. However, a critical issue arises due to the absence of a comprehensive critical edition of the chapter 12 of the *Siddhisthāna* of the *Carakasamhitā*, leaving uncertainty about the total number of *tantrayuktis* recognized by Drḍhabala in this section.<sup>599</sup> The problem arises from different readings of the half-verse that occurs right before the list of 36 *tantrayuktis*. In MS Kathmandu NAK 1/1648 (dated 1183 AD, the oldest dated manuscript of the *Carakasamhitā* known to us), the reading of this verse is: षट्त्रिंशद्विचित्राभिर्भू[षि]तं तन्त्रयुक्तिभिः ॥ This number of 36 *tantrayuktis* perfectly agrees with the following list of the 36 *tantrayuktis*. A similar reading is found in Trikamji's 1933 *Carakasamhitā*

597 तत्राधिकरणं योगो हेत्वर्थोऽर्थः पदस्य च ।

प्रदेशोद्देशनिर्देशवाक्यशेषाः प्रयोजनम् ॥

उपदेशापदेशातिदेशार्थपत्तिर्निर्णयाः ।

प्रसङ्गैकान्तनैकान्ताः सापवर्गो विपर्ययः ॥

पूर्वपक्षविधानानुमतव्याख्यानसंशयाः ।

अतीतानागतापेक्षास्वसंज्ञोह्यसमुच्चयाः ॥

निदर्शनं निर्वचनं नियोगोऽथ विकल्पनम् ।

प्रत्युत्सारस्तथोद्धारः सम्भवस्तन्त्रयुक्तयः ॥

*Aṣṭāṅgasāṅgraha* 6.50.150–153a (As 1980: 959). *Carakasamhitā* 8.12.41b–45a

(Ca 1941: 736) reads almost the same. The only two variants are (1) अतीतानाग-  
तावेक्षा... and (2) निर्वचनं संनियोगो विकल्पनम्.

598 Aruṇadatta on the *Aṣṭāṅgaḥṛdayasamhitā* 6.40.78 (Ah 1939: 946).

599 We know from internal textual evidence that the *Siddhisthāna* of the *Carakasamhitā* in which the list of the *tantrayuktis* appear was originally authored by Drḍhabala, who lived in a town called Pañcanada sometime between 300 and 500 AD.

Cf. अखण्डार्थं दृढबलो जातः पञ्चनदे पुरे ।

कृत्वा बहुभ्यस्तन्त्रेभ्यो विशेषोज्ज्वलिलोच्चयम् ॥

सप्तदशौषधाध्यायसिद्धिकल्पैरपूरयत् ।

8.12.39–40a (Ca 1941: 735)

edition which contains only the *mūla*-text.<sup>600</sup> However, although most of the other editions consist of the same reading, a number of editions show quite a lot of discrepancies with the number. For example, Trikamji's 1941 edition of the *Carakasamhitā* reads the same half-verse as षट्त्रिंशता विचित्राभिर्भूषितं तन्त्रयुक्तिभिः। 8.12.41a (Ca 1941: 735). In the same edition, the reading of Cakrapāṇi's *Āyurvedadīpikā* supports the reading: षट्त्रिंशत्तन्त्रयुक्तिभिर्भूषितमपूरयद्दृढबल इति योजना. However, after this verse, the same edition consists of the versified list of the 36 *tantrayuktis* and commenting on these verses, the *Āyurvedadīpikā* confirms the total number of the *tantrayuktis* as 36: इत्येताः षट्त्रिंशत्तन्त्रयुक्तयो व्याहृताः।<sup>601</sup> Moreover, the edition of Rāmaprasāda Vaidyopādhyāya reads the half-verse as— पञ्च-त्रिंशद्विचित्राभिर्भूषितं तन्त्रयुक्तिभिः.<sup>602</sup> Rāmaprasāda Vaidyopādhyāya excludes *ūhya*.<sup>603</sup> The same reading is found in Satīśacandra Śarmā's third edition of the *Carakasamhitā*.<sup>604</sup> However, adding more troubles to it, Satīśacandra Śarmā, in his Bengali translation, says that there are 34 *tantrayuktis* (even though the main Sanskrit text of his edition counts 35). Then he in fact illustrates 36 *tantrayuktis* making a remark that states—

“in Gaṅgadhara's reading, there are 36 *tantrayuktis* because he counts *saṁśaya* twice in his commentary. But 35 was reckoned in his *mūla*-text. Another manuscript reckons 34 *tantrayuktis* excluding *apadeśa*. This edition reads thirty-five instead of thirty-four or thirty-six.”<sup>605</sup>

In the edition of Narendranātha Senagupta and Balāicandra Senagupta that includes Cakrapāṇi's *Āyurvedadīpikā* and Gaṅgadhara's *Jalpakaḥpataru*, the Sanskrit *mūla* and the *Jalpakaḥpataru* enumerate 36

600 षट्त्रिंशता विचित्राभिर्भूषितं तन्त्रयुक्तिभिः ॥ 8.12.70a (Ca 1933: 972).

601 Ca 1941: 737.

602 Ca 1911: 1913.

603 Understanding the *tantrayukti samuccaya* as *asamuccaya*, he reads the verse where *ūhya* appears as— अतीतानागतापेक्षा स्वसंज्ञा ह्यसमुच्चयाः. Surely, this reading is erroneous as the plural ending after *samuccaya* does not make sense.

604 Ca 1923: 1020. His first edition, however, reads the half-verse the same as the reading in Ca 1933. (Ca 1904: 884)

605 “গঙ্গাধর পাঠ— তন্ত্রযুক্তি ছত্রিশ প্রকার। তিনি টীকাতে সংশয়কে দুই বার উল্লেখ করিয়া ছত্রিশ প্রকার গণনা করিয়াছেন, কিন্তু তাঁহার মূলে পঁয়ত্রিশ প্রকার আছে; গ্রন্থান্তরে ৩৪ প্রকার আছে; তাহাতে ‘অপদেশ’ ধৰ্তব্য হয় নাই। এই অনুবাদের মূলে চতুস্ত্রিংশ বা ষট্‌ত্রিংশ স্থলে পঞ্চত্রিংশ লিখিত হইল।” Ca 1923: 1022.

*tantrayuktis*. However, in the same edition, the *Āyurvedadīpikā* reads, पञ्च-त्रिंशत्तन्त्रयुक्तिभिर्भूषितमपूरयद्दृढबल इति योजना.<sup>606</sup> Again, after the illustrations of the 36 *tantrayuktis* it reads, इत्येताः षट्त्रिंशत्तन्त्रयुक्तयो व्याहृताः.<sup>607</sup> In his edition of the *Tantrayuktivicāra*, Muthuswami also mentions that 35 *tantrayuktis* are reckoned in the *Carakasamhitā*.<sup>608</sup> Jivānanda Vidyāsagara's edition gives no number at all— तथा च ता विचित्राभिर्भूषितं तन्त्रयुक्तिभिः.<sup>609</sup>

Commentaries on the *Carakasamhitā* prior to Cakrapāṇi's *Āyurveda-dīpikā*, such as the *Carakanyāsa* of Bhaṭṭāra Hariścandra (c. mid-sixth century) or *Nirantarapadaavyākhyā* of Jejjaṭa (c. 7th or 8th century AD) do not help much because the extant portions of these commentaries do not include the concerned section of the 12th chapter of the *Siddhisthāna*. However, Hariścandra was possibly not aware of the total number and the list of the *tantrayuktis* in the final chapter of the *Siddhisthāna* because he discussed the *tantrayuktis* right at the beginning of his commentary and showed no indication to the awareness about the discussion on the *tantrayuktis* at the end of the text. Moreover, he discusses 40 *tantrayuktis* instead of 36. It is not yet settled whether or not Hariścandra was aware of Drḍhabala's redaction of the *Carakasamhitā*. However, Hariścandra's treatment of the *tantrayuktis* supports the latter.<sup>610</sup> It is clear from Cakrapāṇi's commentary on the *Carakasamhitā* that in the version of the text he commented upon contained the four verses that list the 36 *tantrayuktis*. It is, however, not improbable that the four verses that list the 36 *tantrayuktis* were later added to the *Carakasamhitā* sometime between the sixth (the date of Hariścandra) and the eleventh century (the date of Cakrapāṇi) and the discrepancy appeared when the previous verse that gives the total number of the *tantrayuktis* was not properly emended by the scribes complying with the following list of 36 *tantrayuktis*. There is a need of a critical edition of the twelfth chapter of the *Siddhisthāna* of the *Carakasamhitā* to address these issues definitely.

606 N. Senagupta and B. Senagupta 1928–33: III, 3814.

607 N. Senagupta and B. Senagupta 1928–33: III, 3822.

608 'पञ्चत्रिंशद्विचित्राभिर्भूषितं तन्त्रयुक्तिभिः।' इति चरके । द्वात्रिंशदिति सुश्रुतः । (fn.2 TYV: 2).

609 Ca 1877: 961.

610 HIML: IA, 189.

## Commentaries

The commentators who extensively delved into the discussion of the *tantrayuktis* are Hariścandra, the author of *Carakanyāsa*, and Aruṇadatta, who authored his commentary *Sarvāṅgasundarī* on the *Aṣṭāṅgaḥṛdaya* of Vāgbhaṭa. Hariścandra meticulously defined and analyzed 40 *tantrayuktis* at the beginning of his work. The four additional *tantrayuktis* are: *paripraśna* (question), *vyākaraṇa* (grammatical clarification), *vyutkrāntābhīdhāna* (overpassing statement) and *hetu* (means of knowledge).<sup>611</sup>

Aruṇadatta, while discussing the concept of *tantraguṇa* at the end of the *Aṣṭāṅgaḥṛdaya*, provided an elaborate description of *tantrayuktis*, considering them as part of a system of ninety-five *tantraguṇas*. Śrīdāsapaṇḍita (14th century), a commentator on the *Aṣṭāṅgaḥṛdaya*, echoed Aruṇadatta's exploration of *tantrayuktis* in the beginning of his commentary, *Hṛdayabodhikā*.<sup>612</sup> Thus, both Hariścandra and Śrīdāsapaṇḍita engage with this topic right at the beginning, underscoring the significance they attribute to the subject. Other noteworthy commentators who discussed the topic of *tantrayukti* are Cakrapāṇi (11th century) and Indu (sometime between 8th and 12th century). Cakrapāṇi and Indu defined and illustrated the *tantrayuktis* mentioned in the *Carakasamhitā* and the *Aṣṭāṅgasāṅgraha*, respectively. They affirm the inclusion of the four additional *tantrayuktis* in Hariścandra's list. Cakrapāṇi, aligning them with existing concepts, incorporates *paripraśna*, *vyākaraṇa*, and *vyutkrāntābhīdhāna* under the *tantrayuktis* *uddeśa*, *vyākhyāna*, and *nirdeśa*, respectively. According to him, *hetu* serves as an overarching term encompassing all *pramāṇas* (means of knowledge) such as *pratyakṣa* (perception) and others. Indu, however, outlines three possible reasons for not incorporating these *tantrayuktis* into the list: (1)

<sup>611</sup> This text has only been published once (only until the third chapter of *Sūtrasthāna*) by Masta Ram Shastri from Lahore in 1932/33. (HIML: IB, 290) Unfortunately, it is currently inaccessible to us. Although some fragmented manuscripts of the *Carakanyāsa* exist, for this section (Chapter 1, *Sūtrasthāna*), we were able to consult only MS MS Jamnagar GAU 114. This is a recent apograph with several lacunae and corruptions. The list of the *tantrayuktis* provided in the *Carakanyāsa* is as follows (with some emendations made in the reading): तन्त्रस्य युक्तयोऽधिकरणाद्याश्चत्वारिंशत् ।... युक्तयस्तावदधिकरणं योगो हेत्वर्थ उद्देश उपदेशोऽपदेशोऽतिदेशः प्रदेशो निर्णयोऽर्थापत्तिर्वाक्यशेषः प्रयोजनं प्रसङ्ग एकान्तोऽनेकान्तो विपर्ययोऽपवर्गः पूर्वपक्षो विधानमनुमतं व्याख्यानं परिप्रश्नो व्याकरणमतीतापेक्षणमनागतापेक्षणं संशयः स्वसंज्ञोद्भवः समुच्चयो निदर्शनं निर्वचनं नियोगो विकल्पः प्रत्युत्सार उद्धारः सम्भवो व्युत्क्रान्ताभिधानं हेतुरिति ।

<sup>612</sup> HIML: IA, 680.



they lack direct mention in the main text, (2) they could be considered as falling within the scopes of already enumerated *tantrayuktis*, or (3) they are not recognized as *tantrayuktis*. *Jalpakaḥpataru*, a nineteenth-century commentary on the *Carakasamhitā* by Gaṅgādhara Kavirāja from Bengal also discusses the *tantrayuktis*. He defines the *tantrayuktis* most often as defined in the *Suśrutasaṃhitā* making explicit quotations from the *Suśrutasaṃhitā* itself.

### Monographs

two texts authored by Āyurvedic scholars exclusively delve into the topic of *tantrayukti*. The first is the *Tantrayuktivivāra* by a physician named Nīlamegha (also known as Vaidyanātha), while the second is called the *Tantrayukti*, which is a sort of recast of the former by an anonymous author. The anonymous author describes himself as being from the same lineage as Nīlamegha and asserts that Nīlamegha belongs to the same lineage of Bhiṣagārya (also known as Nārāyaṇa Bhiṣaj). Both Nīlamegha and the author of *Tantrayukti* are likely from Kerala or coastal Karnataka.<sup>613</sup> According to Kolatteri Śaṅkaramenon and Meulenbeld, Nīlamegha flourished in the first half of ninth century.<sup>614</sup> The *Tantrayukti* was very likely composed after the sixteenth century.<sup>615</sup>

613 Kolatteri Śaṅkaramenon, the first editor of the *Tantrayuktivivāra*, believes that Nīlamegha hails from Kerala. This conclusion is drawn from Nīlamegha's reference to his guru as Sundara, whom Śaṅkaramenon identifies as the same individual credited with composing the *Lakṣaṇāmṛta*, a treatise on toxicology. This assertion is plausible because the only known manuscript of *Tantrayuktivivāra* belongs to a member of one of the Aṣṭavaidya families of Kerala, aligning with the Vāgbhaṭa school, to which Nīlamegha also belongs. (HIML: IIA, 143.) On the other hand, the anonymous author of the *Tantrayukti* associates Nīlamegha with the lineage of Bhiṣagārya, who hails from Uṇṭuru, a village located 3 kilometers from Gokaṇṇa which is in coastal Karnataka. (Nārāyaṇa 1949: 30).

614 Nīlamegha mentions Vāhaṭa (Vāgbhaṭa), Indu, and Jejjāta in his work. This places him definitively after the seventh century. The Buddhist influence in the *Tantrayukti* indicates a date not much later than 800 AD. (TYV: अवतारिका ५-६, HIML: IIA, 143.)

615 From the explicit mention of Nīlamegha and Bhiṣagārya in the work *Tantrayukti*, we can say that the author flourished after them. Determining the date of Bhiṣagārya is problematic. However, since the Kairālī commentary on the *Aṣṭāṅgahṛdayasaṃhitā* frequently quotes from Bhiṣagārya's *Abhidhānamāñjarī*, it indicates that Bhiṣagārya predates the composition of this commentary. Meulenbeld suggests the end of the seventeenth century as the terminus post quem for the Kairālī (HIML: IA, 675).

Nīlamegha's *Tantrayuktivīcāra* is a versified text accompanied by an autocommentary. The text comprises eighteen verses plus a hemistich, resulting in a total of 37 hemistichs. Each hemistich serves as a definition for a *tantrayukti*. Nīlamegha enumerates a total of 36 *tantrayuktis*, as mentioned in the *Aṣṭāṅgasāṅgraha* and *Carakasamhitā*. The additional hemistich defines *aviparyaya*, which, according to Nīlamegha, is sometimes considered instead of *viparyaya*. This substitution occurs when one understands that the negative prefix *a-* is deleted due to a *pūrvarūpa sandhi*— *sāpavargaḥ + aviparyayaḥ → sāpavargo viparyayaḥ* (See footnote 597.).

The text of the *Tantrayukti* includes some verses at the beginning and end, where the author discusses the lineage of Nīlamegha. The author explicitly states that his text is a revised version of Nīlamegha's *Tantrayuktivīcāra* because the available manuscripts were mostly corrupt.<sup>616</sup> It is evident that there are substantial reproductions of parts of the *Tantrayuktivīcāra* and its autocommentary. The total number of *tantrayuktis* and their enumeration remains identical to that of the *Tantrayuktivīcāra*. What distinguishes it from the *Tantrayuktivīcāra* is the incorporation of a list of other *tantraguṇas* and 14 *tantradoṣas*. This list of *tantraguṇas* includes 15 types of *vyākhyā*, 7 types of *kalpanā*, 20 types of *āśraya*, and 17 types of metaphoric and metonymic devices, such as *tācchīlya* and so on.

## Tantrayukti-inventories

It is evident from the discussion on the early sources that all these listings of the *tantrayuktis* in the early sources can be grouped into two categories. For the ease of our following discussion, we name these two inventories as (1) earlier listing and (2) later listing.

Moreover, he views *Abhidhānamāñjarī* as a work composed after the sixteenth century, citing details within it that affirm its posteriority to the *Rājanighaṇṭu* and *Bhāvaprakāśa* (HIML: IIA, 442).

616 वैद्यनाथोपसृष्टानां लक्ष्यलक्षणवासुषाम् ॥  
तासां प्रायः प्रकाशानां दुर्लेखापङ्कदूषणात् ।  
क्रियते साम्प्रतं कृच्छ्रादुद्धृत्य परिमार्जनम् ॥  
Nārāyaṇa 1949: 1

## Earlier Listing

The four inventories of *tantrayuktis* from the *Arthaśāstra*, *Suśrutasamhitā*, *Viṣṇudharmottarapurāṇa*, and *Saddanīti* belong to what we call the “earlier Listing.” The reason to call this listing as “earlier listing” is: two early Sanskrit texts, viz., the *Arthaśāstra* and the *Suśrutasamhitā* consists of this listing. The Tamil list of the *tantrayuktis* as found in the *Tolkāppiyam* also belongs to this group, even though not all of the *uttis* in this list might correspond accurately to the Sanskrit and Pali lists. A defining characteristic of this listing is that each inventory explicitly states the total number of *tantrayuktis* as thirty-two.<sup>617</sup> Even though there are sometimes different *tantrayuktis* enumerated in different lists, the total count always remains consistent at 32. As demonstrated in Table 4, the Sanskrit and Pali lists are similarly ordered and are always accompanied by similar or identical definitions. This list appears across diverse disciplines.

## Later Listing

The “later listing” is the one we find in the *Aṣṭāṅgasaṅgraha*, *Carakasamhitā*, the commentaries on the *Carakasamhitā*, *Aṣṭāṅgasaṅgraha* and *Aṣṭāṅgahrdayasamhitā* and the two monographs, the *Tantrayuktivicāra* and *Tantrayukti*. This list has sprung from a single source— a versified list of thirty-six *tantrayuktis* comprising four verses that appear in the *Aṣṭāṅgasaṅgraha*, *Carakasamhitā* and Aruṇadatta’s commentary on the *Aṣṭāṅgahrdayasamhitā*. It remains unclear whether these verses initially appeared in the Dṛḍhabala’s redaction of the *Carakasamhitā* or Vāgbhaṭa’s *Aṣṭāṅgasaṅgraha*. Unlike the “earlier Listing,” this list lacks definitions of the *tantrayuktis*. Definitions and illustrations are given by the authors of the commentaries and monographs as discussed in the previous section. Although Hariścandra’s list includes 40 *tantrayuktis* instead of 36, his enumeration aligns more closely with “later listing” than the earlier one. Despite the earlier listing’s corss-disciplinary appearance, the later listing

617 तद् द्वात्रिंशद् युक्तियुक्तम् । (5.1.3 Kangle 1965: 1, 280) “that (*Arthaśāstra*) is furnished with thirty-two logical methods of the system”, तत्र द्वात्रिंशत् तन्त्रयुक्तयो भवन्ति । (*Suśrutasamhitā* 6.64.2) “there are thirty-two logical methods of the system”, battimsa tantiyuttiyo bhavanti/ (*Suttamālā*, 28 *Saddanīti* 3: 920) “there are thirty-two logical methods of the system”, எண்ணான்கு உத்தியின்... “It employs thirtytwo rules of criticism regarding writing.” (*Nannūl*: 9–10)

notably influences the field of Āyurveda, likely due to the popularity of Vāgbhaṭa's works. The *Suśrutasamhitā*, incorporating the "earlier listing" distinguishes itself among Āyurvedic texts that list the *tantrayuktis*.

## Terminology

The terms have been translated into English in numerous books and articles. English renditions of the terms can be found in English translations of the *Suśrutasamhitā* such as in Singhal and Mitra 1980: 171–172, and P. V. Sharma 1999–2001: 3, 631–639; in translations of the *Carakasamhitā* such as in R. K. Sharma and Dash 2006: 436–444 and in Shree Gulabkunverba Ayurvedic Society 1949: 1050, in the translation of the *Arthaśāstra* such as in Shamasastri 1951: 459, Kangle 1965: 593, Unni 2006: 1103 and Olivelle 2013, and by K. Srikanta Moorthy in TYV: Appendix xi–xxxiv. They are also found in various books and articles dedicated to discussing the *tantrayuktis* such as in Oberhammer 1968: 601–602, Solomon 1976–78: 1, 72, Lele 1981: 34–155, 2006: 36–150 and so on. German translations of the terms can be found in Meyer 1926: 663–664 (German translation of the *Arthaśāstra*) and in Prets and Prandstetter 1991–2006.

The definitions of *tantrayuktis* exhibit numerous variations across different texts. Here we will discuss each of the *tantrayuktis* that occur in the *Suśruta Samhitā* in comparison with their definitions in other texts. As indicated in Table 4, the definitions of *tantrayuktis* in the *Suśrutasamhitā* are frequently either identical or nearly identical to those found in the *Arthaśāstra*, *Viṣṇudharmottarapurāṇa* and *Saddanīti*. Therefore, unless the definitions in these two texts notably deviate from those in the *Suśrutasamhitā*, we will not make explicit references to them in the subsequent elucidation of the terms.

### 1. *adhikaraṇa*

*Adhikaraṇa* appears as the first *tantrayukti* in all traditional enumerations. It is among those *tantrayuktis* for which there is little disagreement concerning its definition. This *tantrayukti* functions as a structural and interpretative device. With a tautological expression, the *Suśrutasamhitā* defines *adhikaraṇa* as something, with reference to which statements are made. While defining *adhikaraṇa*, the text employs the same verb, *adhi- kṛ-* (to refer),

whence the noun *adhikaraṇa* has been derived. The text supplies examples of *rasa* (taste) and *doṣa* (humour), for which two chapters of the *Uttaratantra*, namely chapter 62 (*Kāyacikitsā* 27) and chapter 65 (*Kāyacikitsā* 30) are dedicated.<sup>618</sup> Clearly, *adhikaraṇa* is the topic or theme.

Cakrapāṇi and Gaṅgādhara define *adhikaraṇa* in almost the same way as does the *Suśrutasaṃhitā*.<sup>619</sup> Aruṇadatta's definition is similar but he specifies that *adhikaraṇa* can be of an entire discipline (*śāstra*), or a book (*sthāna*) of it, or a chapter (*adhyāya*), or a section (*prakaraṇa*), or even of a sentence (*vākya*).<sup>620</sup> However, in the commentaries of Hariścandra and Indu, we explore two more aspects of the concept of *adhikaraṇa*. According to Hariścandra, *adhikaraṇa* is the reason or ground referring to which the authors direct their discourse. For example, diseases create misery and the authors of Āyurveda began their discussion addressing them.<sup>621</sup> Thus disease is the *adhikaraṇa* or theme of their discussion. Indu identifies *adhikaraṇa* as a binding force that links ideas. According to him, *adhikaraṇa* as an introductory reference and it exposes a general statement to a specific context.<sup>622</sup>

Nīlamegha defines *adhikaraṇa* using the Paninian terminology. According to him, *adhikāraṇa* is the locus in which the *tātparya*, "reference" lies.<sup>623</sup> *Adhikaraṇa* is one of the six *kāraka*-s (a sort of semantic roles recognized by Sanskrit grammarians). Pāṇini calls it a locus (*ādhāra*).<sup>624</sup> Through metaphorical extensions, the idea of a locus can apply to abstract domains and not merely to physical locus. In traditional Sanskrit grammar, a metonymic or metaphorical domain is called *vaiśayika adhikaraṇa*. Patañjali considers *vaiśayika* as one of the three types of *adhikaraṇa*.<sup>625</sup> Nīlamegha applies this idea to his definition of the *tantrayukti adhikaraṇa*. He quotes *Aṣṭāṅgahṛdaya-saṃhitā Sūtrasthāna* 1.5b-6a and explains how the eight limbs of Āyurveda

618 They are chapters 63 and 66 in A (*Su* 1938: B).

619 यमर्थमधिकृत्य प्रवर्तते कर्ता । यथा "विघ्नभूता यदा रोगा" इत्यादि । अत्र रोगादिकमधिकृत्यायुर्वेदो महर्षिभिः कृत इति 'रोगाः' इत्यधिकरणम् । *Āyurvedadīpikā* (*Ca* 1941: 736). तद् यमर्थमधिकृत्योच्यते; *Jalpakaḥpataru* (N. Senagupta and B. Senagupta 1928–33: III, 3815).

620 तत्र अधिकरणं नाम, यदधिकृत्य प्रवर्तते शास्त्रं स्थानमध्यायं प्रकरणं वाक्यं वा ।... (*Ah* 1939: 947).

621 तत्राधिकरणं नाम यन्निमित्तमधिकृत्य प्रवर्तते कर्ता ।... उत वा विघ्नभूता यदा रोगाः प्रादुर्भूताः तदिदं निमित्तमधिकृत्य जगदनुकम्पया महर्षिभिरयमायुर्वेद आगमः । एवमधिकरणव्याख्या वर्णयितव्या । MS Jamnagar GAU 114, p.4–5.

622 अधिकरणं प्रस्तावः सामान्येनोक्तमप्यर्थजातं यद्वलाद्विशेषेऽवस्थाप्यते तदधिकरणम् । (*As* 1980: 959).

623 तत्राधरोऽधिकरणं तात्पर्यं तत्र तिष्ठति । 1[2]muth-1976.

624 आधारोऽधिकरणम् । *Aṣṭādhyāyī* 1.4.45.

625 On *Aṣṭādhyāyī* 6.1.72 *Mahābhāṣya*: 3, 51.

serve as the *adhikaraṇas* of *cikitsā* “treatment”. In Nīlamegha’s understanding, *adhikaraṇa* “theme” is the domain of a reference. The *Tantrayukti* repeats Nīlamegha’s idea but it also adds different types of *adhikaraṇa* as suggested by Aruṇadatta.

In the *Tolkāppiyam*, however, the equivalent expression for this *tantrayukti* remains unclear, as commentators, namely Ḹampūraṇar and Pērācīriyar, list the item differently. In Sastri’s translation of the *Tolkāppiyam*, *adhikaraṇa* was identified with *atikāra murai*, the second element in Ḹampūraṇar’s list. Sastri translates this expression as “deciding the extent where one serves as *adhikāra sūtra* or a word or words in a *sūtra* taken along with the *sūtra*-s that follow.”<sup>626</sup> However, Dikshitar, in his brief article on the *tantrayuktis*, equates *adhikaraṇa* with *nutaliyatu arital*, the first element in Pērācīriyar’s list, and translates it as “that division of a book which centers around a chief topic and deals wholly with that topic.”<sup>627</sup> Clearly, Dikshitar’s interpretation stands close to our definition of *adhikaraṇa*. Sastri’s interpretation, on the other hand, corresponds to the concept of *adhikāra* “heading” and *anuvṛtti* “recurrence” in the *sūtra* literature, especially in Pāṇini’s *Aṣṭādhyāyī*.<sup>628</sup>

The translators usually translated this *tantrayukti* as “topic” or “subject matter”.

## 2. *yoga*

This *tantrayukti* typically occupies the second position in most lists, except in the *Arthaśāstra* where it appears third following *vidhāna*. Functioning as a syntactic and semantic tool, *yoga*, as defined in the *Suśrutasaṃhitā*, represents the faculty responsible for the cohesion of a sentence. If we consider the main purpose of the *tantrayuktis* as narrated in the *Suśrutasaṃhitā*, namely, cohesion of a sentence (*vākyayojana*) and cohesion of meaning (*arthayojana*), it becomes evident that this *tantrayukti* is one of the fundamental *tantrayuktis* functioning as the device for *vākyayojana*. The *Suśrutasaṃhitā* further describes *yoga* as a syntactic connection between words, facilitating the linking of words even when they are in reverse order or placed apart. However, this paraphrased statement is absent

<sup>626</sup> Sastri 2002: 233.

<sup>627</sup> Dikshitar 1930: 85

<sup>628</sup> See Chevillard 2009: 111.



in the vulgate; instead, it appears in the commentary of Ḍalhana with a minor variation.<sup>629</sup> The definitions of *yoga* in the *Viṣṇudharmottarapurāṇa* and *Arthaśāstra* closely mirror that of the *Suśrutasamhitā*. However, the *Viṣṇudharmottarapurāṇa*'s definition introduces a slight variation by including the term *artha* "meaning". According to this definition, *yoga* is that by which the meaning of a sentence coheres. The *Arthaśāstra* employs a nominalized verb in a compound noun instead of a relative clause— *vākyayojanā* "connecting a sentence". The definition we find in the *Saddanīti* is close to the paraphrased part of the definition of the *Suśrutasamhitā*.<sup>630</sup>

For illustration, a verse from chapter 18 of the *Cikitsāsthāna* is quoted in the *Suśrutasamhitā*—

तैलं पिबेच्चामृतवल्लिनिम्बहंसाह्वयावृक्षकपिप्पलीभिः ।  
सिद्धं बलाभ्याञ् च सदेवदारु हिताय नित्यं गलगण्डरोगे ॥<sup>631</sup>

In this verse, the noun sesame oil (*tailam*) appears at the beginning of the first hemistich, while its adjective cooked (*siddham*) is placed at the beginning of the final hemistich. Despite not being colocated, the *tantrayukti yoga* effectively connects them, facilitating our comprehension of the intended meaning. Evidently, this exemplifies a device for linking words within a sentence.

In the commentaries of Hariścandra, Indu, Cakrapāṇi and Aruṇa, however, the *tantrayukti yoga* is used in a broader sense. In these interpretations, *yoga* serves not only as a device for cohesion within a sentence but also fosters coherence among sentences in a discourse. Hariścandra identifies three alternative interpretations of *yoga*.<sup>632</sup> Aruṇadatta also interprets *yoga* in a similar fashion but instead of three alternatives he talks about the first two alternatives of Hariścandra. In the first alternative, *yoga* is coherence between the main statement (*sūtra*) and its gloss (*bhāṣya*). Aruṇadatta expands its scope to coherence between mention (*uddeśa*) and description (*nirdeśa*) as well.<sup>633</sup> In the second alternative, *yoga* is

<sup>629</sup> See 6.65.9 (*Su* 1938: 815).

<sup>630</sup> See Table 4.

<sup>631</sup> 4.18.47 (*Su* 1938: 474).

<sup>632</sup> योगो नाम योजना ग्रन्थानां यथार्थसूत्रभाष्यसूत्रयोः... पञ्चलक्षणो वा योगः । प्रतिज्ञाहेतूदाहरणनिगमनानि... यदिह युज्यते स योग इत्येके । (MS Jamnagar GAU 114, p.5.)

<sup>633</sup> योगो नाम योजना, उद्देशनिर्देशयोः सूत्रभाष्ययोर्वा । 6.40.80 (*Ah* 1939: 947).

reasoning (*yukti*) having five types: (1) *pratijñā* “proposition”, (2) *hetu* “reason”, (3) *udāharaṇa* “exemplification” (4) *upanaya* “application”, and (5) *nigamana* “conclusion”, resembling the five-membered syllogism of inference (*anumāna*) in the Nyāya-Vaiśeṣika school.<sup>634</sup> Hariścandra also notes a different understanding of this *tantrayukti* by some others. In this sense, *yoga* is connectedness. This alternative definition is close to that of the *Suśrutasamhitā*. In Indu’s interpretation, *yoga* is lexical cohesion, as he understands *yoga* as a relation between a word and its meaning or a sentence and its meaning.<sup>635</sup> Cakrapāṇi, while defining *yoga* in a fashion similar to the *Suśrutasamhitā*, exemplifies it as a connection between five logical elements, namely *pratijñā*, *hetu*, *udāharaṇa*, *upanaya* and *nigamana*, conflating the definition of *yoga* with Hariścandra’s second alternative i.e. *yoga* is reasoning (*yukti*).<sup>636</sup> Nīlamegha defines *yoga* as connecting words one by one coherently.<sup>637</sup> As he further explains in the autocommentary with examples from the *Aṣṭāṅgaḥṛdayasamhitā*, it is evident that he understands *yoga* as coherence between a part of a sentence and the discourse.<sup>638</sup> Neither V. R. Ramachandra Dikshitar nor P. S. Subrahmanya Sastri identified the *tantrayukti yoga* with any *utti* mentioned in the *Tolkāppiyam*.<sup>639</sup>

The word *yoga* derives from the Sanskrit root  $\sqrt{yuj}$  “to connect” with the primary suffix *GHañ*, which is often used for creating action nouns. In Sanskrit technical literature, the term *yoga* is used in a broad sense to mean any kind of linguistic connection or connectedness. In the *Aṣṭādhyāyī* of Pāṇini, it often refers to the connection with a word or a word-element.<sup>640</sup> Hence, it refers to a morphosemantic or syntaco-semantic connection. Patañjali uses this term several times in his *Mahābhāṣya*. In the *Suśrutasamhitā* the word *yoga* is primarily used to mean the connection between words in a sentence. According to this definition and illustration, it is primarily intra-sentential cohesion. Unlike the later commentators on the works of Caraka and Vāgbhaṭa, it does not extend the scope of this term to inter-sentential

634 युक्तिर्वा योगः, प्रतिज्ञा हेतुर्दृष्टान्त उपनयो निगमनमिति पञ्चविधः । 6.40.80 (Ah 1939: 947).

635 योगो नाम योगः सम्बन्धः स च पदार्थयोर्वाक्यार्थयोर्वा । 6.50.150a (As 1980: 959).

636 योगो नाम योजना व्यस्तानां पदानामेकीकरणम् । उदाहरणं तावद्यथा प्रतिज्ञाहेतूदाहरणोपनयनिगमनानि । 8.12.41 (Ca 1941: 736).

637 योगः पदानामेकैकमर्थौचित्येन योजना । 2[3]muth-1976.

638 । TYV: 3.

639 Chevallard 2009: 84.

640 Joshi and Roodbergen 1991: 64.



cohesion and coherence. Keeping in mind such definition given in the *Suśrutasamhitā*, we translate the term as cohesion even though no other translators of the *tantrayuktis* used this translation. In some other contexts, however, *yoga* can be extended to coherence. Both coherence and cohesion are derived from the Latin verb *cohaere*- (< *con*- “with” *haereō* “cling”) “to cling together.” In other translations of the *tantrayuktis* (see p. 221), *yoga* is variously translated as employment, arrangement, conjoiner, connecting, concomitance, uniting, union, rational linking, joining and so on. We preferred the term cohesion because the other options are either too narrow or too vague. ‘Employment’ is rather *prayoga*, not *yoga*. ‘Rational linking’ disregards the grammatical aspect of *yoga*. ‘Conjoiner’, ‘connecting’, ‘union’, ‘uniting’ or ‘arrangement’ are vague and they do not reflect the technical import of the term *yoga*.

### 3. *padārtha*

In the earlier listing, *padārtha* follows *yoga*, while in the later listing, this *tantrayukti* is enumerated after *hetvartha*, possibly due to metrical requirements. The *Suśrutasamhitā* dedicates more words to describing this *tantrayukti* than any other early texts.

The description in the *Suśrutasamhitā* commences with the definition of *padārtha*, which is articulated as the meaning conveyed in an aphorism or a word. It then delves into the literal interpretation of the term *padārtha*. The straightforward meaning of the compound *padārtha*, obtained by dissecting its components—*pada* “word,” and *artha* “meaning”—is “the meaning of one or more words.” After presenting the literal interpretation of *padārtha*, the *Suśrutasamhitā* provides the rationale why mere word meanings cannot suffice as the *tantrayukti padārtha*—since a word or words may have multiple meanings. Therefore, as a *tantrayukti*, the term *padārtha* denotes the meaning of a word or words within a specific context.<sup>641</sup> Ḍalhaṇa also supports this perspective, indicating that the term *padārtha* refers to a specific meaning of a word or words.<sup>642</sup>

In (Su 1938), a variant reading of the definition of *padārtha* is noted: सूत्र-पदे in the place of सूत्रे पदे वा. It remains unclear which reading was available

<sup>641</sup> See fn. 649.

<sup>642</sup> अधुना बहुषु पदार्थेषु निर्धार्य विशिष्टपदार्थग्रहणाय पदार्थबहुत्वं प्रतिपादयति— अपरिमिता इत्यादि । Ḍalhaṇa on 6.65.10 (Su 1938: 816).

to Ḍalhaṇa. He proposed an etymological meaning of the word *pada*, defining it as that by which a meaning is understood, and includes *sūtra* under the semantic scope of *pada*. Essentially, he viewed *sūtra* as a type of *pada* because, by conveying a meaning, a *sūtra* falls under the category of *pada*, which by definition signifies a meaning-conveying unit. This interpretation does not separate *sūtra* and *pada* as distinct entities. Thus, if Ḍalhaṇa's reading of the text is सूत्रे पदे वा, he perceived *pada* as a synonym or an alternative term for *sūtra*. On the other hand, if the reading was सूत्रपदे, he understood the meaning of the word सूत्रपदे as *pada* (a meaning-conveying unit) in the form of a *sūtra*. The editor of (Su 1938) offered a more straightforward explanation of the variant reading सूत्रपदे—a word (*pada*) in a *sūtra* is a *sūtrapada*.<sup>643</sup> The Viṣṇudharmottarapurāṇa adopts a definition of *padārtha* close to this variant reading, stating that *padārtha* is the meaning employed in a word of a *sūtra* (see table 4).

The *tantrayukti padārtha* is illustrated with two examples in the *Suśrutasaṃhitā*. In the first example, three polysemous words—*sneha*, *sveda* and *abhyāñjana*—are provided. Ḍalhana gave various meanings of these words—*sneha* can mean lubricity or grease or affection; *sveda* can mean sauna either with fire (*sāgni*) or without fire (*niragni*); *abhyāñjana* may mean the black eye make-up or oil rub (*abhyāṅga*).<sup>644</sup> In the case of such polysemy, *padārtha* or signification will be the meaning which coheres with the prior and subsequent elements (*pūrvāparayogasiddha*). The definition of this *tantrayukti* in Saddanīti corresponds to this explanation.<sup>645</sup> Thus, *padārtha* is that meaning which fits the context.

The second example is taken from the very beginning of the first chapter of the *Sūtrasthāna* that says वेदोत्पत्तिमध्यायं व्याख्यास्यामः, “I shall narrate the chapter on the origin of knowledge (*veda*).” The problem is, what does this word “*veda*” refer to? Is it the *Veda*, as in *Sāmaveda*? Or something derived from the roots  $\sqrt{vi(n)d}$  or  $\sqrt{vid}$ ? Context (“prior and subsequent elements”) can help us to know that “*veda*” means only *āyurveda* and that the *Suśrutasaṃhitā* is talking about the origin of *āyurveda*, specifically. This same issue is also addressed by Ḍalhaṇa at 1.1.1 (Su 1938: 1).

643 अन्ये तु सूत्रपदे इति पठित्वा व्याख्यानयन्ति--- सूत्रस्य पदं सूत्रपदं तस्मिन् योऽर्थः स पदार्थः। fn.2 (Su 1938: 813).

644 “तत्र स्नेहशब्दे निर्दिष्टे हि गुणप्रेमसर्पिषां त्रयाणामर्थानामुपपत्तिर्दृश्यते, स्वेदशब्देनापि साग्निरग्निकयोरुष्मणोः प्राप्तिः, अञ्जनशब्देनापि नयनाञ्जनाभ्यङ्गयोः प्राप्तिः” Ḍalhaṇa on 6.65.10 (Su 1938: 816).

645 See table 4.

## Specific issues

The roots *vid* and *vind*

At page ??, the *Suśrutasamhitā* ...

## Characteristics of the Manuscript Transmission

## Translation

- 1 Now we shall explain the chapter called, “the enunciation of the logical methods of the system (*tantrayukti*).”
- 3 There are thirty-two logical methods of the system. They are as follows:

- |  |   |
|--|---|
| 1. topic ( <i>adhikaraṇa</i> )                 | 18. objection ( <i>pūrvapakṣa</i> )               |
| 2. cohesion ( <i>yoga</i> )                    | 19. determination ( <i>nirṇaya</i> )              |
| 3. signification ( <i>padārtha</i> )           | 20. consent ( <i>anumata</i> )                    |
| 4. premise ( <i>hetvārtha</i> )                | 21. itemization ( <i>vidhāna</i> )                |
| 5. mention ( <i>samuddēśa</i> )                | 22. future reference<br>( <i>anāgatāpekṣaṇa</i> ) |
| 6. description ( <i>nirdeśa</i> )              | 23. past reference<br>( <i>atīkrāntāpekṣaṇa</i> ) |
| 7. prescription ( <i>upadeśa</i> )             | 24. doubt ( <i>saṁśaya</i> )                      |
| 8. statement of reason ( <i>apadeśa</i> )      | 25. explication ( <i>vyākhyāna</i> )              |
| 9. indication ( <i>pradeśa</i> )               | 26. field-specific term<br>( <i>svasaṁjñā</i> )   |
| 10. prediction ( <i>atideśa</i> )              | 27. interpretation ( <i>nirvacana</i> )           |
| 11. exception ( <i>apavarga</i> )              | 28. illustration ( <i>nidarśana</i> )             |
| 12. ellipsis ( <i>vākyaśeṣa</i> )              | 29. compulsion ( <i>niyoga</i> )                  |
| 13. implication ( <i>arthāpatti</i> )          | 30. option ( <i>vikalpa</i> )                     |
| 14. contraposition ( <i>viparyaya</i> )        | 31. aggregation ( <i>samuccaya</i> )              |
| 15. recontextualization<br>( <i>prasaṅga</i> ) | 32. deducible ( <i>ūhya</i> )                     |
| 16. invariable statement ( <i>ekānta</i> )     |   |
| 17. variable statement ( <i>anekānta</i> )     |   |

- 4 It is said about this, “what is the purpose of these methods?” The answer is, “cohesion of a sentence and cohesion of meaning”.<sup>646</sup>
- 5-6 There are two verses about this:

*The logical methods of the system prohibit statements employed by people who do not speak the truth. They also bring about the validity of one's own statements. And they also clarify meanings that are stated back to front, that are implicit, unclear and any that are partially stated.*

<sup>646</sup> Ḍalhaṇa on 6.65.4 (Su 1938: 815) explained “cohesion of a sentence” as “connecting up a sentence that is not connected,” and “cohesion of meaning” as “clarifying or making appropriate a meaning that is implied or inappropriate.”

- 8 Among them, “topic (*adhikaraṇa*)” refers to the object, with reference to which statements are made, such as flavour (*rasa*) or humour (*doṣa*).<sup>647</sup>
- 9 “Cohesion (*yoga*)” is that by which a sentence coheres, as when words that are in a reversed order, whether placed close or apart, have their meanings unified.

Sesame oil he should drink, with heart-leaved moonseed creeper, neem tree, maidenhair fern, Indrajao, and long pepper

that is cooked with heart-leaf sida and country mallow, and deodar, always for a benefit in the case of the disease goitre.

In this verse, one ought to say, first, “one should drink cooked....” However, the word “cooked” is used in the second line.<sup>648</sup> Unifying the meanings of words in this way, even though they are far apart, is cohesion.

- 10 The meaning that is conveyed in an aphorism (*sūtra*) or a word is called signification (*padārtha*). The meaning that is attached to one or more words is the meaning of the words (*padārtha*). There are innumerable meanings of a word or words.<sup>649</sup>

Where two or three meanings of words such as *sneha*, *sveda* or *añjana* appear to be possible, the signification is the one that coheres with prior

647 The idea here is that “*rasa*” may be the topic of a chapter, and statements in that chapter are all understood to be about that topic

648 The Nepalese version reads द्वितीये पादे which would properly mean the second quarter of the first line; the vulgate reads “third quarter” which seems more correct.

649 Contrary to the translations by previous translators Singhal and Mitra and P. V. Sharma, we believe that there is a distinction in how the term *padārtha* is employed in the first sentence, which serves as the definition of this *tantrayukti*, and in the two subsequent sentences, which pertain to the non-technical understanding of the word *padārtha*. We have translated the initial use of the word *padārtha* as “signification” and the subsequent use as “meanings of a word or words.” Without presupposing the distinct usage of the word *padārtha* in this passage, the statement, अपरिमिताश्च पदार्थाः, might seem out of context, as it would not make sense to assert that there are innumerable *padārthas* once the text has already specified that *padārtha* refers to the particular meaning conveyed in a *sūtra* or a word. Furthermore, the subsequent illustration featuring three polysemic words—*sneha*, *sveda*, and *añjana*—also supports our argument. Through these examples, the text advocates for the perspective that in cases where a word has multiple meanings, only the interpretation that aligns with the preceding and subsequent elements should be regarded as *padārtha*.

and subsequent elements.<sup>650</sup> For example, when it is said that, “We are going to explain the chapter on the *veda*-origin” the mind may be confused about which “*veda*” will be spoken about. *Sāmaveda* and so on are the Vedas.<sup>651</sup> Taking note of the prior and subsequent elements,

650 There is a dangling relative clause, योऽर्थः, in the Nepalese version that is avoided in the vulgate recension by the addition of स ग्रहीतव्यः. There are two possible explanations for this discrepancy: firstly, the missing main clause may have been present in the archetype but inadvertently omitted in the Nepalese version due to a scribal error. Alternatively, the main clause could have been elliptical in the archetype. The scribes of the Nepalese manuscripts accurately transmitted the text. However, at some stage during the transmission process, the main clause was supplied as an attempt to rectify the ungrammatical sentence. Considering the principle *lectio difficilior potior*, we may posit that the second scenario is more plausible. This is because the subject of the main clause can be inferred from the subject of the previous sentence, and within the context, the meaning of the sentence remains totally intelligible even without the explicit main clause.

651 Both (Su 1938) and the excerpts from the *Suśrutasaṃhitā* cited in the *Jalpakaḷpataru* read ऋग्वेदादयस् तु वेदाः, “*R̥gveda* and so on are the Vedas.” Traditionally, the *R̥gveda*, being the earliest composed *Veda*, is often considered the prototype. However, the selection of *Sāmaveda* as the prototype in the Nepalese Version of the *Suśrutasaṃhitā* is intriguing. This choice brings to mind a verse from the *Bhagavadgītā* where Kṛṣṇa declares, वेदानां सामवेदोऽस्मि (10.22) 456pans-1936, “I am the *Sāmaveda* among the Vedas.” With its incorporation of musical elements, the *Sāmaveda* holds a unique charm compared to the *R̥gveda*. Thus, the decision to prioritize the *Sāmaveda* as the prototype may stem from its intrinsic appeal or enchantment rather than chronological precedence. Cf. Madhusūdana Sarasvatī’s comment on the same verse: चतुर्णां वेदानां मध्ये गानमाधुर्येणातिरमणीयः सामवेदोऽहमस्मि (10.22 BhaGī: 456), “amongst the four Vedas I am the *Sāmaveda*, which is extremely delightful due to its musical charm.”

the two roots *vind* “find” and *vid* “know”<sup>652</sup> have a single meaning.<sup>653</sup>

652 Three issues need to be addressed here: (1) representation of the verb roots, (2) the homonymy of *vid*, and (3) variant readings in (Su 1938) and *Jalpakaalpataru*.

(1) The text suggests the etymology of the word *veda* by mentioning two verb roots, namely *vinda* and *vida*. It is worth noting that there is not a single method for representing Sanskrit verb roots, even within traditional Sanskrit grammar like that of Pāṇini. Verb roots are presented in various forms, including mere lexical root forms (e.g. गुप्तिज्जिह्वः सन् (3.1.5 *Aṣṭādhyāyī*: 3, 235)), forms ending in *-a* (e.g. विभाषा गम-हनविदविशाम् (7.2.68 *Aṣṭādhyāyī*: 6, 168)), ending in *-i* (e.g. मृजेर्विभाषा (3.1.113 *Aṣṭādhyāyī*: 3, 329)), or with the ending *-ti* in the present stem (cf. अस्यतिवक्तिख्यातिभ्योऽङ् (3.1.52 *Aṣṭādhyāyī*: 3, 284)), or sometimes with indicatory sounds (*anubandha*) as found in the *Dhātupāṭha* (cf. इषुगमियमां छः (7.3.77 *Aṣṭādhyāyī*: 6, 282), इषुगं इच्छायाम् (*Dhātupāṭha* 6.78)). In the reading of the Nepalese version of the *Suśrutasaṃhitā*, the second option, representing the verbs with a final *-a*, is adopted.

(2) The second issue pertains to the homonymy of *vid* in Sanskrit *Dhātupāṭhas*, where at least four homonymous verbs are mentioned. They all belong to different classes and signify different meanings:  $\sqrt{vid}$  “to know” belongs to the second class (*adādi* or the root class),  $\sqrt{vid}$  “to find, to attain” to the sixth class (*tudādi* or the suffixally accented thematic class),  $\sqrt{vid}$  “to consider” to the 7th class (*rudhādi* or the athematic nasal infix class) and  $\sqrt{vid}$  “to exist” to the fourth class (*divādi* or the thematic *ya*-suffix class). Cf. सत्तायां विद्यते ज्ञाने वेत्ति विन्दे विचारणे । विन्दते विन्दति प्राप्नोति श्यन्लुक्श्रमोष्विदं क्रमात् ॥ (*SiddhKau*: 402). A 10th-class verb  $\sqrt{vid}$  is also mentioned in the *Dhātupāṭha* but this appears to be derived from the other *vid* verbs with a pleonastic causative suffix. The 4th-class *vid* is also originally a derivative of the other *vid* verbs formed with the passive suffix. The sixth-class verb *vid* belongs to a subclass called *mucādi*, characterized by a nasal infix. Thus, it is clear that *vinda*, the first of the two verbs mentioned in the *Suśrutasaṃhitā*, is the *vid* of the 6th class. The form *vinda* is, therefore, the present stem of the sixth-class verb *vid*. Mentioning verbs in their present stem forms is not uncommon. Cf. अनुपसर्गाह्निम्पविन्दधारिपरिवेद्युदेजिचेतिसातिसाहिभ्यश्च (3.1.138 *Aṣṭādhyāyī*: 3, 343). The other one may be the 2nd- or the 7th-class *vid*. The nominalized form of all of these verbs, using the suffix *GHaÑ*, is *Veda*. This is where the ambiguity appears.

(3) In 6.65.10 (Su 1938: 813), the verbs are represented as they appear in the Paninian *Dhātupāṭha*, with indicatory letters (*anubandha*) and meanings attached to the roots—विद विचारणे, विदू लाभे. However, the citation from the *Jalpakaalpataru* presents another variant—विद् विचारणे विद् विन्दति (N. Senagupta and B. Senagupta 1928–33: 3, 3816). In both of these variants, the meanings of the verb roots appear. The *vid* verbs here are the 7th- and the 6th-class verbs respectively. The absence of meanings attached to the verb roots in the Nepalese version suggests the preservation of an older form of the text. Most probably, meanings were not initially attached to the verb roots in the original Paninian *Dhātupāṭha* and were later additions, possibly by Bhīmasena. See Cardona 1976: 161–163.

653 The Nepalese text here is hard to follow, and the vulgate has a significantly different reading. But the problem situation seems to be as follows. The *Suśrutasaṃhitā* opens



- Subsequently, the understanding takes place that there is a wish to talk about the origin of *āyurveda*. So that is the meaning of the word.
- 11 The sense of the cause (*hetvārtha*) is a statement that is a premiss (*sādhana*). For example, just as a lump of earth is moistened by water, so a wound is moistened by substances like milk with **green gram**.<sup>654</sup>
  - 12 A mention (*samuddēśa*) is a brief statement such as “spike (*śalya*)”.<sup>655</sup>
  - 13 A description (*nirdeśa*) is a detailed statement. For example, “in the body or exogenous”.<sup>656</sup>
  - 14 “Prescription (*upadeśa*)” refers to statements like “it should be this way.” For example, one should not stay awake at night; one should not sleep during the day.
  - 15 “Statement of reason” refers to statements like “this happens because of this.” For example, in the sentence “Sweet substances increase phlegm,” the reason is stated.<sup>657</sup>
  - 16 Substantiation of the subject matter through past evidence is “indication (*pradeśa*)”. For example, he pulled out Devadatta’s splinter (*śalya*), therefore he will pull out Yajñadatta’s.
  - 17 Substantiation of the subject matter through a future event is “prediction (*atideśa*)”. For example, if his wind moves upwards, that will cause

See also  
Dālhaṇa  
at 1.1.1  
(Su 1938: 1)

with a statement saying that it will describe the “origin of the *veda*” (*vedotpatti*). The problem is, what does this word “*veda*” refer to? Is it the Veda, as in Sāmaveda? Or something derived from the roots √vind or √vid? Context (“prior and subsequent elements”) can help us to know that “*veda*” means only “*āyurveda*” and that the *Suśrutasamhitā* is talking about the origin of *ayurveda*, specifically. This same issue is also addressed by Dālhaṇa at 1.1.1 (Su 1938: 1).

- 654 The way this principle is expressed here seems to be describing the application of a general principle (water makes things wet) to a specific context. We can know the moistening of a wound because we know the more general case of moistening earth. However, etymologically, हेत्वर्थ does not mean “analogy,” but rather, something like “purpose of the reason.” The phrase “the sense of cause” that we have used leans on the use of the term in commentaries on the *Aṣṭādhyāyī* (*Kaumudī* on 2.3.23). The vulgate of the *Suśrutasamhitā* rewrites the principle, making it clearer that the principle means “clarification by analogy.” Cf. also Cakrapāṇi’s discussion at Si.12.41 (Ca 1941: 736), where he explained the principle as using an explanation from one situation to clarify another situation. Cf. *Arthaśāstra* 5.1.13 (Olivelle 2013: 436), which is also unclear.
- 655 Generally, शल्य refers to any painful foreign body embedded in the flesh that requires surgical removal.
- 656 This is a reference to 1.26.4 (Su 1938: 121) where शल्य is described in more detail as being of two kinds.
- 657 A technical term also in Nyāyaśāstra (Jhalakīkar 1978: 54).



him to have colic.”<sup>658</sup>

- 18 A deviation after generalization is exception (*apavarga*). For example, those afflicted by poison should not go through sudorific treatment other than the cases of poisoning by urinary worms.
- 19 Ellipsis (*vākyaśeṣa*) refers to an unstated word that completes a sentence. For example, despite not mentioning the word ‘person’, when mentioning someone as ‘the one having a head, hands, feet, flanks, and abdomen,’ it’s apparent that the reference is to a person.
- 20 arthāpatti (*Implication*) refers to an unstated idea that becomes evident through context. For example, when one said, “We will eat rice” it becomes evident from the context that he did not wish to drink gruel.
- 21 When there is the reversal of it it is contraposition (*viparyaya*). For example, when it is said, “Weak, dyspneic, and fearful people are difficult to treat,” the converse holds true: “Those who are strong and so on are easily treatable.”
- 22 Recontextualization (*prasaṅga*) refers to a concept common to another section. For example, a concept belonging to another section is brought up by mentioning it repeatedly throughout.
- 23 Invariable statement (*ekānta*) is one that is stated with certainty. For example, **turpeth** causes purgation; **emetic nut** induces vomiting.
- 24 Variable statement (*anekānta*) is one that is true in one way in some cases and in another way elsewhere. For example, some teachers identify the main element as substance, others as fluid, some as semen, and some as digestion.
- 25 A first point of view (*pūrvapakṣa*) is something stated with certainty. For example, how are the four types of diabetes caused by wind incurable?<sup>659</sup>
- 26 Its answer is determination. For example, afflicting the body and trickling downwards, it creates urine mixed with fat, fatty tissues, and marrow. Thus, those caused by wind are incurable.
- 28 Consent refers to others’ opinion that is not rejected. For example, when the assertor says that there are six flavours and that somehow gets accepted with affirmation, it is termed consent.

See chapter  
40 of Sūtra-  
sthāna.

vasā / me-  
das / maj-  
jan

<sup>658</sup> A techical term also in Nyāyaśāstra (Jhalakīkar 1978: 6–7).

<sup>659</sup> The adverb निःसंशयम् is problematic: the example expresses a query or doubt, the opposite of certainty, which is answered in the next passage. It would seem to make more sense to read something like यस् तु संशयम् अभिधीयते स पूर्वपक्षः, but our manuscripts are unanimous in their reading.

- 29 Itemization (*vidhāna*) refers to sequentially ordered statements within a chapter. For example, the eleven lethal points of thigh are mentioned sequentially in a chapter.
- 30 A statement like “Thus will be stated” is future reference (*anāg-atāpekṣaṇa*) such as when he says in the *Sūtrasthāna*, “I will mention it in the *Cikitsāsthāna*.”
- 31 A statement like “Thus has been stated” is past reference (*atīkrāntāpekṣaṇa*) such as when one says in the *Cikitsāsthāna*, “As mentioned in the *Sūtrasthāna*....”
- 32 An indication pointing to causes on both sides is doubt (*saṁśaya*). For example, a blow to <sup>660</sup> is fatal, whereas cutting hands and feet is not fatal.
- 33 An elaborate description is explication (*vyākhyāna*). For example, the twenty-fifth entity, , is being explicated here. Thus, no other Āyurvedic texts discuss entities beginning with matters.
- 34 Field-specific term (*svasaṁjñā*) is uncommon in other field of studies. The term used in one’s own systems is called field-specific term, such as in this system, denotes honey and ghee, and denotes ghee, sesame oil and fat.
- 35 A customary portrayal is interpretation (*nirvacana*). For example, one goes along the shade fearing heat.
- 36 Providing examples is illustration (*nidarśana*). For example, just as fire spreads rapidly in a dry forest when accompanied by wind, a wound intensifies affected by wind, bile, and phlegm.
- 37 A statement like “This is the only way...” ...compulsion (*niyoga*). For example, one should consume only a healthy diet.
- 39 A statement like “This and this...” is option (*vikalpa*). For example, in the section on meat, the major ones are blackbuck, deer, quail and part-ridge.<sup>661</sup>
- 38 A summarized statement is aggregation (*samuccaya*).<sup>662</sup> For example, let there be rice with meat broth, rice with milk, or burley with ghee.

Does  
bhūtādi a  
compound  
or it means  
ahankāra or  
ego?

660 तलहृदय is one of the muscle-group of lethal points mentioned in 3.6.7 (*Su* 1938: 370).

661 The example here matches समुच्चय (next text), not विकल्प. There seems to have been a metathesis of terms. Y. T. Ācārya and N. R. Ācārya (*Su* 1945: 1005, footnote 6) notes that this text and the next have been swapped in the Calcutta edition that includes Hārānacandra’s commentary Bhaṭṭācārya 1910–17: 2, in the same way as in the Nepalese version.

662 As stated in the previous footnote, the example here is of विकल्प, not समुच्चय.

A meaningful reading of these two rules would be

39 idaṃ vedaṃ veti vikalpaḥ / yathā rasodanaḥ kṣīrodanaḥ  
saghṛtā vā yavāgūr bhavatv iti //

38 saṃkṣepavacanāṃ samuccayaḥ / yathā māṃsavarge eṇa-  
hariṇalāvatittirāḥ pradhānā iti

- 40 What is not explicitly stated but can be understood through discernment is deducible (*ūhya*). For example, in the section on rules of foods and drinks, four types of foods and drinks are mentioned— masticable (*bhakṣya*), edible (*bhojya*), suckable (*lehya*), and drinkable (*peya*). Thus, while four types are needed to be stated, two types are actually mentioned. Here it is deducible that in the section on foods and drinks, by specifically mentioning two types, the four types are also mentioned. Furthermore, a masticable item is not excluded from the category of food because it shares the same characteristic of solidity. A suckable item is not excluded from being classified as a drink because it shares the same characteristic of liquidity. Four types of aliments are rare. They are usually just twofold. Therefore, lord Dhanvantari says “Two-fold is popular”.

# Index of Manuscripts

*Numbers after the final colon refer to pages in this book.*

Bikaner RORI 5157: 116

Cambridge CUL Add.1693: 112

Hyderabad Osmania 137-3(b): 45

Kathmandu KL 699: 40, 46, 115, 187

Kathmandu NAK 1-1079: 13, 23, 41, 46

Kathmandu NAK 1-1146: 23

Kathmandu NAK 1/1648: 214

Kathmandu NAK 5-333: 13, 41, 46, 112, 117, 142

MS Jamnagar GAU 114: 217

NAK 5-333: 130



# Materia Medica

Numbers after the final colon refer to pages in this book.

- aconite leaf (?) (*viṣapatrikā*) Unknown. Cf. perhaps, *vatsanābha* ([wolfsbane](#)). Cf. **gvdb** : [125](#)
- ‘alas, alas’ (*hālāhala*) unknown. See Cf. *Soḍhalanighantu* p.43 (sub bola) = *stomaka* = *vatsanābha* :
- Alexandrian laurel (*punnāga*) *Calophyllum inophyllum*, L. See **avs**, **NK** :
- amaranth (*taṇḍulīyaka*) *Amaranthus hypochondriacus*, L. See King 321, **NK**, **potter**. Cf. **avs** : [118](#)
- arjun (*arjuna*) *Terminalia arjuna*, Bedd. See **HK** : [36](#), [65](#)
- ash gourd (*kūṣmāṇḍa*) → *puṣpaphala*. *Beninkasa hispida*, (Thunb.) Cogn. See **avs**; cf. **avs** :
- Asoka tree (*aśoka*) *Saraca indica* Linn., **gvdb** : [90](#), [92](#), [174](#)
- atis root (*śṛṅgīviṣa*) *Aconitum heterophyllum*, Wall. ex Royle. See **avs**, **NK** :
- axlewood (*dhava*) *Anogeissus latifolia* (Roxb. ex DC.) Wall. ex Guill & Perr. See **avs**, **chopra** : [36](#), [65](#), [140](#)
- bamboo leaves (*veṇupatrikā*) *Bambusa bambos*, Druce. See **NK** : [118](#)
- banyan (*nyagrodha*) *Ficus bengalensis*, L. See **HK** :
- banyan (*vaṭa*) *Ficus bengalensis* Linn., **gvdb** : [66](#)
- barley (*yava*) *Hordeum vulgare*, L. See **HK** : [99](#)
- bearded premna (*vasuka*) *Premna barbata* Wall. (← *vasuhaṭṭa*), according to Cakrapāṇidatta. See the discussion by **gvdb**, where other candidate species such as *Osmanthus*, *Calotropis*, and *Trianthema* are discussed. **gvdb** note that when *vasuka* is mentioned with *vasira*, two varieties of salt are often meant (see *vasukavasirā*). See also **NK** who identifies it with *Indigofera enneaphylla*, Linn. (Birdsville Indigo), apparently without controversy : [65](#)
- beautyberry (*priyaṅgu*) → *śyāmā*. *Callicarpa macrophylla*, Vahl. See **avs**, **NK**. Some say also *Setaria italica* Beauv. **gvdb**. See also **gvdb** : [36](#), [136](#), [141](#), [174](#)
- beautyberry (*śyāmā*) *Callicarpa macrophylla*, Vahl. See **avs**, **NK** : [94](#), [116](#), [118](#)
- beggarweed (*aṃśumatī*) *Desmodium gangeticum* (L.) DC (**dymock**, **meul-plants1**, **NK**; **adps**, 414 and **avs**, 4.366 are confusing) : [136](#)
- beggarweed (*vidārigandhā*) → *śālāparṇī*. *Desmodium gangeticum* (L.) DC. See **dymock**, **meul-plants1**, cf. **NK**; **adps** and **avs**, 4.366 are confusing : [45](#), [99](#), [288](#)
- beggarweed (*śālāparṇī*) → *sthirā*. *Desmodium gangeticum* (L.) DC. See **dymock**, **meul-plants1**, **NK**; **adps**, 414

- and **avs**, 4.366 are confusing :  
 Bengal quince (*bilva*) Aegle marmelos (L.)  
 Corr. See **avs**, Chevallier 159, **NK**,  
 (**moni-sans**) : 65, 90, 92, 96, 285  
 'big poison' (*mahāviṣa*) unknown. See ? :  
 'big thorn apple' (*mahākarambha*) Datura  
 metel, L.?. See **thorn apple** (*karambha*) :  
 bitumen (*adrija*) → *śilājī*. A tar-like, black,  
 resinous rock exudate. See **josi-maha** :  
 151  
 black cardamom (*Xhareṇu*) Amomum  
 subulatum, Roxb.?. See PVS Caraka  
 2.734, **avs**, **NK**, **pace gvdb** :  
 black creeper (*pālindī*) Ichnocarpus  
 frutescens, (L.) R.Br. or Cryptolepis  
 buehneri, Roemer & Schultes. See **avs**,  
**NK**, **adps**. Ḍalhaṇa on SS 5.1.82  
 identified *pālindī* with *trivṛt* (**turpeth**)  
 and **gvdb** supported this as a usual  
 identification : 118, 121, 135, 136  
 black pepper (*marica*) Piper nigrum, L. See  
**adps**, **NK** : 100, 174  
 black pepper (*vallīja*) → *marica*. Piper  
 nigrum, L.?. See **NK**; Rā.6.115,  
 Dha.4.85, Dha.2.88 :  
 blackboard tree (*saptachada*) Alstonia  
 scholaris R. Br. **gvdb** : 117  
 blackbuck (*harīṇa*) Antelope cervicapra, L.  
 See **bia IW** : 121  
 'blade' (*kartarīya*) unknown. See ? :  
 blue water-lily (*utpala*) Nymphaea stellata,  
 Willd. See **meul-plants1**, **IGP** 790;  
**dutt-1922**, **NK** : 27, 116, 135, 136,  
 174, 175  
 bottle gourd (*ālābūka*) Lagenaria siceria  
 (Molina) Standl. See **IGP** 645, **NK** :  
 bull's head (*gokṣura*) Tribulus terrestris L.  
**gvdb**. A component of **lesser five roots** :  
 282  
 bull's head (*trikaṇṭaka*) → **bull's head**  
 (*gokṣura*) **gvdb**. A component of **lesser**  
**five roots** : 288  
 bulrush (*kaṣeru*) "Two species, Scirpus  
 kysoor Roxb., and S. grossus Linn. f.  
 are used" **gvdb**. Also *kaṣeruka* and  
*kaseru* : 94, 95, 98  
 calamine lotion (*amṛtāsaṅga*) →  
 amṛtāsaṅga. Zinc carbonate. See **NK** :  
 camphor (*karpūra*) → *śītaśiva*.  
 Cinnamomum camphora, (L.) Sieb.  
 See **IGP** 253 :  
 cannabis (*vijayā*) Cannabis sativa, L. See  
**avs**, **NK** :  
 caper (*karīra*) Capparis decidua (Forsk.)  
 Edgew. See **avs**, (**moni-sans**) :  
 cardamom (*elā*) Elettaria cardamomum,  
 Maton. See **avs**, **NK**, **potter** : 90, 136, 141  
 carmarī (*carmarī*) unknown. See ? :  
 carray cheddie (*gāṇḍerukī*) → viśvadevā.  
 Canthium parviflorum, Lam. See **avs** :  
 cassia cinnamon (*patra*) Cinnamomum  
 tamala, (Buch.-Ham.) Nees. See **avs**,  
**NK** : 90, 96, 118, 136  
 castor oil tree (*gandharvahasta*) → *eraṇḍa*.  
**gvdb**, **imp** : 41, 92  
 castor-oil (*eraṇḍa*) Ricinus communis, L.  
 See **NK**, **chopra** : 46  
 catechu (*khadira*) Senegalia catechu (L.f.)  
 P. J. Hurter & Mabb = Acacia catechu  
 Willd. **gvdb** : 65  
 certain minerals (*tārāvitāra*) Unknown. It is  
 not even certain that these are minerals.  
 The variant reading in the vulgate,  
*tāraḥ sutāraḥ* was glossed by Ḍalhaṇa on  
 5.3.14 (**Su 1938**: 568) as follows *tāro*  
*rūpyam*, *sutāraḥ pāradah*, "tāra means  
 silver; sutāra means mercury." : 140  
 Ceylon iron wood (*kṣīrikā*) Mimosa  
 hexandra, Roxb. (**gvdb**) :  
 chaff (*kāṇḍana*) The word *kāṇḍana* is not  
 found in dictionaries; *kaṇḍana* is  
 threshing, separating the chaff from the  
 grain in a mortar. Cf. Hemādri's  
*Caturvargacintāmaṇi* (**pwk**) (**siro-1873**,  
 citing the *Vāyupurāṇa*) : 28, 291  
 chaulmoogra (*tuvaraka*) Hydnocarpus  
 wightiana Blume, but see the  
 discussion by (**gvdb**) for the difficulties  
 in identifying *tuvaraka*. See also **avs** :  
 chebulic myrobalan (*harītakī*) Terminalia

- chebula Retz. **gvdb** : 97, 117
- cherry (*elavālu*) *Prunus cerasus*, L.?. See BVDB 58, **NK**, **gvdb** : 136
- chir pine (*sarala*) *Pinus roxburghii*, Sarg. **gvdb** : 65, 98
- chital deer (*pr̥ṣata*) *Axis axis*, Erxleben. See **bia**, **IW** : 121
- ‘choice tree’ (*varadāru*) unknown. See ? :
- chukar partridge (*cakora*) *Alectoris chukar*. See **collins** :
- cinnamon (*tvac*) *Cinnamomum cassia*, Blume. See **NK** :
- citron (*mātuluṅga*) *Citrus medica*, Linn. **gvdb**. Also spelled *mātuliṅga*, *mātulaṅga*, *mātulāṅga* : 65, 96, 101, 102
- cluster fig (*udumbara*) *Ficus racemosa*, L. See **adps** :
- cobra’s saffron (*nāgapuṣpa*) → *nāgakeśara*. *Mesua ferrea*, L. See **NK**, **gvdb** : 136
- common crane (*krauñca*) *Grus grus*. See **collins** :
- common mallow (*suvarcalā*) perhaps *Malva sylvestris*, L. A difficult plant to identify, see **gvdb** :
- common mallow (*sūryāvarta*) *Malva sylvestris*, L. *Cakrapāṇidatta* and *Ḍalhaṇa* identify it with *suvarcalā*, itself a difficult plant to identify. Perhaps *Helianthus*, see **gvdb** :
- common smilax (*śvadamśtra*) *Smilax aspera* L., **gvdb** : 65
- corky coral tree (*pāribhadra*) *Erythrina suberosa* Roxb. See **gvdb** 245 : 140
- costus (*kuṣṭha*) *Saussurea costus*, Clarke. See **NK** : 90, 96, 118, 136, 141
- cottony jujube (*kākolī*) *Ziziphus mauritanica*, Lam. See **IGP**, **NK**; **IGP** 1233. Cf. **NK** : 89, 95, 96, 164
- country mallow (*atibalā*) *Abutilon indicum*, (L.) Sweet, but may be other kinds of mallow, e.g., *Sida rhombifolia*, L.. See **NK**, **IGP**, **NK**, **adps** : 45, 95, 98, 229
- country sarsaparilla (*anantā*) *Hemidesmus indicus*, (L.) R. Br. See **adps**, **avs**–5, **NK**. But see **gvdb** for complications that may suggest that it is to be equated with *sārivā*, which may sometimes be *Cryptolepis* or *Ichnocarpus frutescens* R. Rr. (**gvdb**) : 45, 125, 135, 136, 140
- crape jasmine (*nata*) → **crape jasmine** **gvdb** : 283, 286
- crape jasmine (*tagara*) *Tabernaemontana divaricata* (L.) R.Br. ex Roem. & Schultes. See **meul-plants1**, **avs**. Synonym of **crape jasmine**. But some say *Valeriana jatamansi*, Jones. See **gvdb** for discussion (and charming comments on brain-liquid testing). Some say *tagara* is Indian rose-bay or Indian valerian, but there remain many historical questions about the ancient and regional identities of this plant See, e.g., **avs**. See also **IGP** : 90, 96, 118, 136, 283, 286
- crimson trumpet-flower tree (*pāṭalā*) *Stereospermum chelonides*, (L. f.) A. DC. See **meul-plants1**, **avs**, **adps**, **avs**, **IGP** 1120, **dymock** : 140, 285
- cucumber (*trapusa*) *Cucumis sativus*, L. See **avs**, **NK** :
- cuscut grass (*uśīra*) *Andropogon murcatus*, Retz. Also “vetiver grass.” See **NK** : 66, 118, 162
- datura* (*dhattūra*) *Datura metel*, L. See **avs** (cf. *Abhidhānamajjarī*), **NK**, **potter**, **adps** : 42
- deodar (*bhadradāru*) *Cedrus deodara*, (Roxb.ex D.Don) G. Don. See **avs** 41, **NK** : 36, 95, 99, 136
- deodar (*devadāru*) *Cedrus deodara* (Roxb.) Loud. **gvdb** : 65, 96, 229
- devil’s dung (*hingu*) *Ferula foetida* Regel., **gvdb** : 66, 67
- dhaman tree (*dhanvaṅga*) → *dhammaṇa*? *Grewia tiliaefolia*, Vahl. See **avs**, **IK**, **avs**, **IGP** 529 (*tiliifolia*) :
- dried ginger (*nāgara*) → **dried ginger** (*śuṇṭhī*) **gvdb** : 67
- dried ginger (*śuṇṭhī*) *Zingiber officinale*,



- Roscoe. See **adps**, **NK**, **avs**, **IGP** : 94, 284
- dried meat (*vallūra*) **moni-sans**, **josi-maha**. The term is used, rarely, in both the CS (1.5.10) and SS (1.13. 16, 6.42.75–76). It is a Dravidian loanword and occurs in the *Arthaśāstra* etc. (**mayr-kurz**) : 28
- drum-giver (?) (*lambaradā*) Unknown; cf. **gvdb** : 125
- elixir salve (*rasāñjana*) → *añjana*. See **Indian barberry** : 36, 46
- embelia (*viḍaṅga*) *Embelia ribes*, Burm. f. See **adps**, **avs**, **NK**, **potter** : 36, 65, 90, 136
- emblic (*āmalaka*) *Phyllanthus emblica*, L. See **avs** : 65, 97, 98, 174
- emetic nut (*karaghāṭa*) Probably a synonym for *karahāṭa* (**emetic nut**), q.v., **gvdb** : 284
- emetic nut (*karahāṭa*) *Randia dumetorum*, Lamk. See **gvdb** and **NK**. **gvdb** noted that it may be a synonym for *karaghāṭa*, **emetic nut**, and pointed rather to *Gardenia turgida* Roxb. on the basis of local knowledge in U. P. : 284, 288
- emetic nut (*madana*) *Randia dumetorum*, Lamk. See **NK** : 116, 231
- false daisy (*bhṛṅga*) *Eclipta prostrata* (L.) L. See **gvdb** : 65
- false daisy (*subhaṅgurā*) (*su*)*bhaṅgura* = *bhṛṅga*? *Eclipta prostrata* (L.) L. See **gvdb** : 124
- fermented rice-water (*dhānyāmla*) → *kāñjī*, *kāñjikā*, *sauvīra*. **gvdb**, **NK** : 43, 44
- fern (*ajaruhā*) *Nephrodium* species **gvdb**, uncertain. Perhaps *Christella dentata* (Forssk.) Brownsey & Jermy, which is reported to have folk applications against skin diseases in India : 120
- fire-flame bush (*dhātakī*) *Woodfordia fruticosa* (L.) Kurz. See **avs**, **NK** : 65, 117
- five roots (*pañcamūla*) Described at *Suśrutasaṃhitā* 1.38.66–69 (Su 1938: 169). There are two *pañcamūlas*, the *laghupañcamūla* (the lesser five roots) and *brhatpañcamūla* (greater five roots), with differing properties. Combined they are called *daśamūla* (ten roots). See also **josi-maha** : 65
- five-leaved chaste tree (*śephālikā*) *Vitex negundo*, L. See **NK** (cf. use of leaves), **IGP**, **moni-sans** :
- flame-of-the-forest (*palāśa*) *Butea monosperma* (Lam.) Taub. **gvdb**. *pālāśa* in some sources : 66, 92, 285
- flame-of-the-forest (*pālāśa*) See **flame-of-the-forest** (*palāśa*). The variant name with long initial vowel appears in Nepalese manuscripts :
- flax (*atasī*) *Linum usitatissimum*, L. See **NK**#1495 : 95
- ‘foam-stone’ (*phenāśma*) unknown. See ? :
- fragrant lotus (*saugandhika*) A type of *kumuda* or *utpala* (**gvdb**) : 27
- galangal (*galaṅgala*) *Alpinia galanga* (L.) Sw. Identified with **grey orchid** in Kerala (**adps**). The name is borrowed from Chinese, perhaps via Persian or Arabic (**pete-2012**), and the name does not occur in early āyurvedic literature (**gvdb**) : 285
- galls (*karkaṭa*) *Rhus succedanea*, L. See **NK** :
- garden pea (*kalāya*) *Pisum sativum*, L. See **avs**, **IGP** 901; cf. **NK** :
- garjan oil tree (*aśvakarṇa*) *Dipterocarpus turbinatus* Gaertn. f. See **gvdb**, **chopra** : 140
- ‘gentle’ (*somā*) *Ruta graveolens*, L., or *Sarcostemma brevistigma*, W & A, etc. See **NK**; **potter** :
- giant potato (*kṣīravidārī*) possibly → *kṣīraśukla*. *Ipomoea mauritiana*, Jacq. See **adps**, **avs**, **avs** : 95, 287, 289–291
- ginger (*mahaṣadha*) *Zingiber officinale*, Roscoe. See **adps**, **NK**, **IGP** : 121
- ‘gladdener’ (*nandana*) unknown. See ? :

- gold (*hema*) gold : 136
- gold and sarsaparilla (*surendragopa*)  
Unknown. Ḍalhaṇa on 5.3.15  
(Su 1938: 568) glossed *surendra* as  
“gold” and *gopā* as “Indian  
sarsaparilla.” He also noted other  
opinions that *surendra* was “Tellicherry  
bark” : 140
- golden shower tree (*rājadruma*) *rājadruma*  
= *āragvadha*. Cassia fistula L. See **gvdb**  
37 : 140
- golden shower tree (*rājavarṅka*) → *rājadruma*  
= *āragvadha*. Cassia fistula L. See **gvdb** :  
65
- golden shower tree (*āragvadha*) Cassia  
fistula L. **gvdb**. The plant has many  
synonyms. : 97, 166
- gourd (*alābu*) *Lagenaria siceraria* Standl.  
**gvdb**. Some say *Lagenaria vulgaris*,  
Seringe (NK) but this is not  
appropriate for blood-letting : 23, 24,  
116, 164
- greater five roots (*bṛhatpañcamūla*)  
Described at *Suśrutasaṃhitā* 1.38.68–69  
(Su 1938: 169). Consists of Bengal  
quince, migraine tree, Indian trumpet  
tree, crimson trumpet-flower tree, and  
white teak : 284, 287, 288, 293
- green gram (*māṣa*) *Vigna radiata* (L.) R.  
Wilcz. See **adps**, IGP 1204 : 36, 95, 230
- grey orchid (*rāsnā*) *Vanda tessellata*  
(Roxb.) Hook. ex G.Don, usually. But  
*Pluchea lanceolata*, Oliver & Hiern, is a  
more common identification in Punjab  
and Gujarat (**gvdb**); *Alpinia galanga*  
(L.) Sw. is more common in Kerala  
(**adps**; **pete-2012**), though this is  
usually identified with *galangal*. As all  
authorities note, the identification of  
this plant is debated. **adps** note that  
sources describe it as having leaves like  
cardamom and sweet-smelling roots  
and that “there is great confusion with  
regard to the identity of the drug.” : 65,  
94, 96, 285
- ‘gutboiler’ (*antrapācaka*) unknown. See ? :
- hairy bergenia (*pāṣāṇabheda*) *Bergenia*  
*ligulata* (Wall.) Engl. **gvdb** : 65
- halfa grass (*darbha*) *Demostachya*  
*bipinnata* Stapf. **gvdb**. Synonym of  
*kuśa* : 67, 95
- halfa grass (*kuśa*) *Desmostachya bipinnata*,  
(L.) Stapf. **gvdb**, **avs** : 95, 161
- hare foot uraria (*pr̥thakparṇī*) → hare foot  
*uraria* (*pr̥śniparṇī*) and ?? (*mūrvā*)  
**gvdb**. A component of lesser five roots :  
97, 288
- hare foot uraria (*pr̥śniparṇī*) → *sahā*?  
*Urarialagopoides*, DC. and *U. picta*  
Desv. See **gvdb**, **meul-plants1**,  
**dymock**, **avs**, **NK**; **adps**, **avs** and **avs**  
are confusing. Also called *pr̥thakparṇī*.  
A component of lesser five roots : 94,  
95, 286
- heart-leaf sida (*balā*) *Sida cordifolia*, Linn.  
See **adps**, **NK** : 45, 95, 98, 100, 136, 229
- heart-leaved moonseed (*amṛtā*) → *guḍūcī*.  
*Tinospora cordifolia*, (Willd.) Hook.f.  
& Thoms.? See **adps**, **NK**, Dastur #229 :  
118, 134
- heart-leaved moonseed (*guḍūcī*) *Tinospora*  
*cordifolia*, (Thunb.) Miers. **adps**, **NK**,  
Dastur #229, **gvdb**. Also identified as  
*Cocculus cordifolius* DC. by **NK** and  
others (see also the *Tropicos botanical*  
*database*) : 65, 96
- heart-leaved moonseed (*somavallī*)  
*Tinospora cordifolia* (Thunb.) Miers.  
**gvdb**. Likely, but uncertain : 118
- heart-leaved moonseed creeper  
(*amṛtavallī*) See *amṛtā* : 229
- heliotrope (*hastīśuṇḍa*) → *ibhagandhā*?  
*Heliotropium indicum*, L. See **avs**, **NK** :
- henna (*madayantikā*) *Lawsonia inermis*, L.  
See **avs**, **NK**, **potter** : 119
- hill myna (*sārikā*) *Acridotheres tristis*  
*tristis*, L., etc. See Ali #1006, **dave**,  
**collins** :
- Himalayan mayapple (*vakra*)  
*Podophyllum emodi*, Wall. (**NK**). But

- perhaps a synonym of [crape jasmine](#) and [crape jasmine](#), q.v. (**gvdb**) : 141, 167
- Himalayan monkshood (*ativiṣā*) → *viṣā*  
*Aconitum heterophyllum* Wall. **gvdb**,  
 NK. Also “atis roots”: 88, 119, 121, 141
- Himalayan monkshood (*viṣā*) → *ativiṣā*  
**gvdb** : 290
- hogweed (*punarnavā*) *Boerhaavia diffusa*,  
 L. See **adps**, **avs**, NK : 97, 119, 135
- Holostemma creeper (*jīvantī*) →  
*sūryavallī*? *Holostemma ada-kodien*,  
 Schultes. See **adps**, **avs**, NK : 98, 290
- honey (*kṣaudra*) Eight varieties of honey  
 are described in the SS (NK). *Kṣaudra*  
 is the product of a small bee of tawny  
 colour, called *kṣudra* : 103, 121
- horned pondweed (*śaivāla*) also *śaivāla*,  
*śevāra*. *Zannichellia palustris* L. The  
 uncertainties of this identification are  
 discussed by **gvdb**. Sometimes  
 identified with [scutch grass](#) (*dūrvā*)  
 (**gvdb**). Identified as *Ceratophyllum*  
*demersum* Linn. (“hornwort”) by  
**avsx** : 96, 286, 291
- hornwort (*jalanīlikā*) *Ceratophyllum*  
*demersum*, L. See **avs**, IGP 232 :
- hornwort (*jalaśūka*) → *jalanīlikā*.  
*Ceratophyllum demersum*, L. See **avs**,  
**IGP**. **gvdb** suggest [horned pondweed](#).  
*Ḍalhaṇa* noted on 1.16.19 (**Su** 1938: 79)  
 that some people interpret it as a  
 poisonous, hairy, air-breathing,  
 underwater creature : 45
- horse gram (*kaulattha*) See [horse gram](#)  
 (*kulattha*) : 162
- horse gram (*kulattha*) *Macrotyloma*  
*uniflorum* (Lam.) *Verdcourt*, syn.  
*Dolichos biflorus*, L., *D. uniflorus*,  
 Lam., **gvdb**, **kew** : 99, 100, 166, 286
- horseradish tree (*śigru*) *Moringa oleifera*  
 Lam. See IGP 759, **meul-plants1**,  
**dymock** : 96, 97
- hyacinth bean (*śimbī*) *Dolichos lablab*, L.  
 See NK :
- hyacinth beans (*niṣpāva*) *Lablab purpureus*  
 (L.) Sweet (1826) **gvdp** : 87
- Indian antelope (*eṇa*) *Antelope cervicapra*,  
 L. See **bia** :
- Indian barberry (*añjana*) → *rasāñjana*,  
*dāruharidrā*. *Berberis aristata*, DC.  
**dymock**, NK, **meul-plants1**, IGP : 46,  
 120, 284
- Indian barberry (*dāruharidrā*) *Berberis*  
*aristata*, DC. See **dymock**, NK,  
**meul-plants1**, IGP 141 : 135, 136, 287
- Indian barberry (*dārvi*) → [Indian barberry](#)  
 (*dāruharidrā*) **gvdb** : 175
- Indian barberry (*kālīyaka*) → *dāruharidrā*,  
*añjana*. *Berberis aristata*, DC. See  
**dymock**, NK, **meul-plants1**, IGP : 118
- Indian beech (*naktamāla*) *Pongamia*  
*pinnata*, (L.) Pierre. See **avs**, NK :  
 36, 92
- Indian ipecac (*payasyā*) Uncertain.  
 Possibly *Tylophora indica* (Burm.f.)  
 Merr. Perhaps a synonym of [panacea](#)  
[twiner](#), [giant potato](#), [purple roscoe](#),  
 and [plants like asthma plant and Gulf](#)  
[sandmat](#) (**gvdb**). Also “curds” when  
 not a plant : 45, 96, 290
- Indian jujube (*sauvīra*) *Zizphus jujuba*  
 Mill., **gvdb**, **missouri** :
- Indian jujube (*sauvīraka*) *Zizphus jujuba*  
 Mill., **gvdb**, **missouri** : 95, 162
- Indian kudzu (*vidārī*) → *payasyā*. *Pueraria*  
*tuberosa* (Willd.) DC. See **adps**, **avs**,  
**avs**; not **dymock**. See **meul-plants2**,  
**avs**, but **avs** = *Ipomoea mauritiana*,  
 Jacq : 45, 65
- Indian laburnum (*śampāka*) *Cassia fistula*,  
 L. See **adps**, **avs**, **avs**, IGP 215 :
- Indian laurel (*plakṣa*) *Ficus microcarpa*, L.  
 f. See **adps** :
- Indian madder (*mañjiṣṭhā*) *Rubia*  
*cordifolia*, L. See IGP, **chopra**, **gvdb** :  
 41, 136, 167
- Indian mottled eel (*varmimatsya*) Almost  
 certainly the mottled eel. **moni-sans**  
 noted that the *varmi* fish “is commonly  
 called *vāmi*.” The “vam fish,” or “বান

- মাছ (*bān māch*) in Bengal, is a marine and freshwater eel, *Anguilla bengalensis*. It is the most common eel in Indian inland waters and a prized food fish (**froe-2022**). However, some NIA languages identify the “vam” fish with the Indian Pike Conger, *Congresox talabonides* (Bleeker) (**talw-1984**): 25
- Indian mustard (*sarṣapa*) *Brassica juncea*, Czern. & Coss. See **avs, NK**: 28
- Indian pennywort (*maṇḍūkapaṇī*) *Centella asiatica* (L.) Urban. See **gvdb, adps**:
- Indian sarsaparilla (*sārivā*) → *anantā*. *Hemidesmus indicus*, (L.) R. Br. **adps, avs-5, NK**; and black creeper, *pāṇḍī*. *Ichnocarpus frutescens*, (L.) R.Br. or *Cryptolepis buchanani*, Roemer & Schultes **avs**, 3.145, 3.203, **NK, adps**: 135, 136, 285
- Indian snakeroot (*sarpagandhā*) *Rauvolfia serpentina*, (L.) Benth. ex Kurz. See **NK, adps, gvdb**; cf. SS 5.5.76–78:
- Indian spinach (*pūtīkā*) *Basella alba*, L. See **NK** (rubra), **adps, avs, IGP** 129b:
- Indian trumpet tree (*śyonāka*) *Oroxylum indicum* (L.) Benth. ex Kurz. **gvdb**. A component of **greater five roots**: 287
- Indian trumpet tree (*tiṇṭuka*) → **Indian trumpet tree** (*śyonāka*). *Oroxylum indicum* (L.) Benth. ex Kurz. **gvdb**. A component of **greater five roots**: 285
- indigo (*nīlinī*) *Indigofera tinctoria*, L. See **NK**:
- Indrajao (*indrayava*) see *vr̥kṣaka* (**Indrajao**) *Holarrhena pubescens* Wall. ex G.Don 1837 **gvdb**: 88
- Indrajao (*vr̥kṣaka*) → *indrayava*, *indrabīja*, *kaliṅga*, and *kuṭaja*. *Holarrhena pubescens* Wall. ex G.Don 1837 **gvdb**: 67, 229, 288
- jackfruit (*panasa*) *Artocarpus heterophyllus*, Lam. See **NK, IGP** 99:
- jambul (*jambū*) *Syzygium cumini*, (L.) Skeels. See **adps, NK, potter, wuja-2003b**: 117, 174
- jasmine (*mālatī*) *Jasminum grandiflorum*, L. See **NK**: 118
- jequirity (*guñjā*) *Abrus precatorius*, L. See **avs, NK, potter**: 124, 125
- jequirity (*kālākūṭa*) *Abrus precatorius*, L.? Cf. RRS 21.14. See **avs, NK, potter**: ‘juice-cooker’ (*sārapāka*) unknown. See ? : (?) (*karaṭā*) Not in **gvdb**. Cf. perhaps *karahāṭa* (**emetic nut**): 125
- khesari pea (*tripuṭa*) *tripuṭa* (kalāya). *Lathyrus sativus*, L. See **IGP** 651, **NK**:
- koel (*kokila*) *Eudynamys scolopacea*. See **collins**:
- kumudvatī (*kumudvatī*) unknown. See ? :
- kutki (*ariṣṭā*) *Picrorhiza kurroa* Royle ex Benth. → *kaṭukā* (**kutki**) q.v. (**gvdb**): *kutki* (*kaṭukā*) *Picrorhiza kurroa* Royle ex Benth. (**gvdb**): 88, 103, 288
- lac (*jatu*) *Kerria lacca* (Kerr.). See <http://www.icar.org.in/ilri/default.htm> :
- lac (*lākṣā*) *Kerria lacca* (Kerr.). See **meul-plants1, NK**. **watt-comm** is characteristically informative, and is definite about the antiquity of lac in India: 141
- lāmajja grass (*lāmajj*) *Andropogon iwarancusa*, Roxb. See **NK**:
- lāmajja grass (*uśīrabheda*) → *lāmajja*. *Andropogon iwarancusa*, Roxb. See **NK**:
- leadwort (*agniśikhā*) *Plumbago zeylanica* (or *rosea?*), L. See **NK**: 288
- leadwort (*citraka*) *Plumbago zeylanica* (or *indica?*), L. See RĀ. 6.124, **adps, NK**: 36, 66, 88, 92, 102
- leadwort (*pālaka*) → *citraka*. *Plumbago zeylanica* (*indica?* *rosea?*), L. See Rā. 6.124, **adps, NK**:
- leadwort (*vidyutśikhā*) Synonym of *agniśikhā* (**leadwort**), q.v.: 125
- lesser five roots (*laghupañcamūla*) Described at *Suśrutasaṃhitā* 1.38.66–67 (**Su** 1938: 169). Consists of **bull’s head**, **poison berry**, **yellow-fruit nightshade**, **hare foot uraria**, and **beggarweed**: 282,

- 284, 286, 293, 295  
 liquorice (?) (*klītaka*) *Glycyrrhiza glabra*, L.? **gvdb** discuss the many difficulties in identifying this plant: 124  
 liquorice (*madhuka*) see *yaṣṭimadhuka*: 45, 65, 94–99, 101, 121, 134, 136, 167, 175  
 liquorice (*yaṣṭimadhuka*) *Glycyrrhiza glabra*, L. **avs**, **NK**, **gvdb**: 46  
 ‘little bamboo’ (*veṇukā*) *Bambusa bambos*, Druce?. See **NK**:  
 lodh tree (*lodhra*) *Symplocos racemosa*, Roxb. See **meul-plants1**, **adps**, **NK**. **gvdb** notes that there are two varieties, *S. racemosa*, qualified as *śāvāra*, and *S. crataegoides* Buch.-Ham. for *paṭṭikā lodhra*: 36, 136, 175  
 lodh tree (*rodhra*) *Symplocos racemosa*, Roxb. See **adps**, **NK**:  
 lodh tree (*śāvāra*) → *lodhra*. *Symplocos racemosa*, Roxb. See **adps**, **NK**:  
 long pepper (*māgadha*) *Piper longum*, L. See **NK**; but cf. **avs**: 120  
 long pepper (*pippalī*) *Piper longum*, L. See **adps**, **NK**: 65, 92, 97, 98, 101–103, 121, 136, 174, 229  
 lotus (*nalina*) → **sacred lotus** (*kamala*) **gvdb**: 174, 175  
 lotus stalk (*mṛṇālā*) “Leaf stalk of **sacred lotus**” **gvdb**: 96  
 luffa (*garāgarī*) → gargaraka? *Luffa echinata*, Roxb. See **NK**:  
 luffa (*koṣātaka*) = *koṣītakī*, **luffa**:  
 luffa (*koṣātakya*) *Luffa cylindrica*, (L.) M. J. Roem. or *L. acutangula*, (L.) Roxb. See **adps**, **NK** etc:  
 luffa (*koṣītakī*) = *koṣītakī*. *Luffa cylindrica*, (L.) M. J. Roem. or *L. acutangula*, (L.) Roxb. **adps**, **NK**, **gvdb**: 116, 134, 289  
 luffa gourd (*koṣavātī*) = *koṣītakī*, **luffa**: 134  
 mahua (*madhūka*) *Madhuca longifolia*, (Koenig) Macbride. See **avs**: 65  
 maidenhair fern (*haṃsāhvayā*) *Adiantum lunulatum* Burm f. **gvdb**: 229  
 Malay beechwood (*śrīparṇī*) → *kāśmarī*. *Gmelina arborea* Linn., **gvdb**: 65  
 mango (*āmra*) *Mangifera indica* Linn. **gvdb**: 117, 174  
 mangosteen (*amla*) *Garcinia pedunculata* Roxb. ex Buch.-Ham. See **gvdb**: 166  
 marking-nut tree (*aruṣkara*) *Semecarpus anacardium* L. See *bhallātaka* (**marking-nut tree**): 125  
 marking-nut tree (*bhallātaka*) *Semecarpus anacardium*, L. See **NK**, **avs**: 92, 120, 289  
 medhshingi (*vijayā2*) *Dolichandrone falcata* (DC.) The *Sauśrutaniḡhaṇṭu* gives a number of synonyms for *vijayā* (**suve-2000**). But one of them, *viṣāṇī* (also *meṣāśṛṅgī*), is sometimes equated with *Dolichandrone falcata* (DC.) Seemann (**adpsgvdb**, a plant used as an abortifacient and fish poison (**NK**): 125  
 Midday flower (*bandhūka*) *Pentapetes phoenicea*, L. See **NK**, **gvdb**:  
 migraine tree (*agnimantha*) *Premna corymbosa*, Rottl. See **avs** 1927, **adps**, **NK**, **avs**; **meul-plants1**: = *P. integrifolia/serratifolia*, L.: 134, 285  
 milk-white (*kṣīraśuklā*) An unidentified plant. **gvdb**: see **purple roscoeia** and **giant potato**: 45, 291  
 mongoose (*nakula*) *nakula*. *Urva edwardsii* or the often sympatric *U. auropunctatus* (small Indian mongoose, usually an eater of smaller creatures than snakes) (**bia**), On mongooses and snakes, see **biaIW**: 121  
 monitor lizard (*godhā*) *Varanus bengalensis*, Schneider. See **dani-1983**: 45, 121  
 monkey jack (*lakuca*) *Artocarpus lakoocha*, Roxb. ex Buch.-Ham. See **meul-plants1**, **IGP** 99, **IPM** 3.2338f., pace **avs**:  
 ‘muddy’ (*kardama*) unknown. See ?:  
 mung beans (*mudga*) *Phaseolus radiatus* L. **gvdb**: 95, 98, 180  
 mung beans (*māṣaka*) *Phaseolus mungo* Linn. **gvdb**: 118  
 munj grass (*nārācaka*) *Saccharum bengalense*, Retz.?. See **NK**:



- myrobalan (*abhayā*) *Terminalia chebula*, Retz. See **adps**, **NK**, **potter** : 88, 134, 141
- myrobalans (*pathyā*) *Terminalia chebula* Retz. See **NK** : 174
- natron (*suvarcikā*) Sodium carbonate. **NK**. Ḍalhaṇa identifies *suvarcikā* with *svarjikṣāra* 4.8.50 (**Su** 1938: 441) : 102, 136
- neem tree (*nimba*) *Azadirachta indica* A. Juss. **gvdb** : 42, 229
- nutgrass (*kuruvinda*) Unknown. Ḍalhaṇa on 5.3.15 (**Su** 1938: 568) glossed the term as **nutgrass**, but noted other opinions that it was a whetstone or a very special metallic gem. **gvdb** added that it could be a variety of rice, *ṣaṣṭika dhānya* : 140
- nutgrass (*mustaka*) *Cyperus rotundus*, L. See **adps**, **avs**, **NK** :
- nutgrass (*mustā*) *Cyperus rotundus*, L. See **adps**, **avs**, **NK** : 290
- oleander spurge (*snulū*) *Euphorbia neriifolia*, L., or *E. antiquorum*, L. See **adps**, **avs**, **avs**, **NK**, **IGP** 457b :
- orchid tree (*kovidāra*) *Bauhinia purpurea* Linn. or *B. variegata* Linn. (probably the former), **gvdb**, **avs** : 162
- orpiment (*haritāla*) *Arsenii trisulphidum*. See **NK** v. 2, p. 20 ff :
- panacea twiner (*arkaparṇī*) See *arkapuṣpī*, **panacea twiner** :
- panacea twiner (*arkapuṣpī*) → *arkaparṇī*, *Tylophora indica* (Burm. f.) Merr. **gvdb**. Maybe identical to **Indian ipecac**, **giant potato** and similar sweet, milky plants. See **gvdb** for discussion. For discussion in the context of **Holostemma creeper**, see **adps** and **avs**. The etymology of the name suggests *Helianthus annuus* Linn., but this plant is native to the Americas : 135, 287, 290
- parakeet (*śuka*) *Psittacula krameri/eupatria/cyanocephala*. See **collins** :
- peacock (*mayūra*) *Pavo cristatus*. See **collins** :
- peas (*hareṇu*) *hareṇu* = *satīna*. *Pisum sativum*, L. **gvdb** notes that two plants are usually meant under this name, but there is no agreement on the identity of the second : 96, 135, 136, 141, 174
- peepul tree (*aśvattha*) *Ficus religiosa*, L. See **adps** : 143
- ‘pendent’ (*lambā*) unknown. **gvdb**. Known only from *Suśrutasaṃhitā* 5.2.5. Identified by **moni-sans** on no sound basis as “a kind of bitter gourd or cucumber” :
- periploca of the woods (*meṣaśṛṅga*) *Gymnema sylvestre* (Retz.) R. Br. See **avs**, **NK** : 120
- phalsa (*parūṣaka*) *Grewia asiatica* Linn., **gvdb** : 66
- pheasant peacock (*jīvajīvaka*) *jīvajīvaka*. ?. See ? :
- plants like asthma plant and Gulf sandmat (*kṣīriṇī*) various milky plants, perhaps including *Euphorbia hirta* Linn. (asthma plant) and *E. microphylla* Heyne (Gulf sandmat) (**gvdb**) : 287
- plumed cockscomb (*indīvara*) Uncertain; possibly *Celosia argentea* Linn. But see the useful discussion in **gvdb**. Possibly another name for **thorn apple** (*karambha*), q.v. : 293
- pointed gourd (*paṭola*) *Trichosanthes dioica*, Roxb. **gvdb** : 96, 134
- poison berry (*brhatī*) *Solanum violaceum*, Ortega. See **adps**, **NK**, **avs** : 92, 97, 135, 136, 288
- poison-altar (?) (*viṣavedikā*) Unknown. Possibly, at a guess, *viṣamuṣṭika* (**strychnine tree**)? **gvdb** Or *viṣā* (**Himalayan monkshood**) : 125
- pomegranate (*dāḍīma*) *Punica granatum* Linn. **gvdb** : 65, 101, 102
- pondweed (*paripelavā*) Normally a neuter noun. **gvdb** argued that *plava* and *śaivāla* are the same thing, and may be either *Zannichellia palustris*, L., or

- Potamogeton pectinatus, L : 136
- pondweed (*śevāla*) Zannichellia palustris  
L. See **horned pondweed** : 27, 28
- portia tree (*pārīṣa*) Thespesia populnea  
(L.) Sol. ex. Corr. See **adps** :
- prickly chaff-flower (*apāmārga*)  
Achyranthes aspera, L. See  
**meul-plants**<sup>1</sup>, **avs**, **adps**, **avs**, **dymock** :  
41, 45, 95, 291
- prickly chaff-flower (*vasira*) also *vaśira*.  
Perhaps Achyranthes aspera, L. **gvdb**  
describes several possible identities,  
including *sūryāvarta*, **prickly**  
**chaff-flower** and *markaṭatṛṇa*. See also  
*vasukavasira* (**gvdb**) : 65, 291
- prickly chaff-flower (*vaśira*) See **prickly**  
**chaff-flower** :
- prickly-leaved elephant's foot (*gojihvā*) →  
*gojī*. Elephantopus scaber, L. See **avs** :
- purging nut (*dravantī*) → *mūṣikaparṇī*.  
Jatropha curcas, L. See **avs**, **NK** :
- purging nut (*mūṣikā*) Jatropha curcas, L.  
See **avs**, **NK** : 120
- purple calotropis (*arka*) Calotropis  
gigantea, (L.) R. Br. See **adps**, **avs**, **NK**,  
**potter**, **chop-1958** : 36, 45, 92, 162
- purple calotropis (*khadyotaka*) → *arka*?  
Calotropis gigantea, (L.) R. Br. See  
**adps**, **avs**, **NK**, **potter** :
- purple roscoea (*kṣīrakākālī*) **gvdb** notes  
that many physicians use *Roscoea*  
*procera* Wall. in this context. But the  
identification is uncertain. Possibly  
connected to **milk-white** or **giant**  
**potato** : 95, 287, 289
- racket-tailed drongo (*bhṛṅgarāja*) Dicrurus  
paradiseus. See **collins** :
- radish (*mūlaka*) Raphanus sativus, L. See  
**NK** : 99, 100
- rajmahal hemp (*morāṭa*) → *mūrvī*,  
Marsdenia tenacissima (Roxb.) Wight  
et Arn. Good discussion at **gvdb** : 134
- rajmahal hemp (*mūrvī*) → *morāṭa*,  
Marsdenia tenacissima (Roxb.) Wight  
et Arn. Good discussion at **gvdb** :
- rattan (*vetra*) Calamus rotang, L. See **avs**,  
**NK** :
- red chalk (*gairika*) gairika : 136
- red gourd (*bimbī*) Coccinia indica, W. & A.  
See PVS 1994.4.715; **NK** : 116
- ribbed gourd (*karkoṭaka*) Luffa acutangula,  
(L.) Roxb.? (Mormodica  
cochinchinensis, Spreng.? Cf. Luffa  
tuberosa). See **avs** (**NK**; **NK**) :
- rice grains (*taṇḍula*) Oriza sativa, Linn.  
Same as **unhusked rice** (*śāli*) **gvdb**; or  
just "grains" : 28
- rice-grain chaff (*śālitaṇḍulakāṇḍana*) See  
**chaff** : 28
- rock salt (*saindhava*) See **NK**, **watt-comm** :  
28, 65, 102
- rosha grass (*dhyāmaka*) Cymbopogon  
martinii (Roxb.) Wats. See **avs**, **NK** :  
136
- sacred lotus (*kamala*) Nelumbo nucifera  
Gaertn., **gvdb** : 289
- sacred lotus (*padma*) Nelumbo nucifera,  
Gaertn. See **NK** : 27, 96, 118
- sacred lotus (*prapuṇḍarika*) Nelumbo  
nucifera, Gaertn. See Dutt 110, **NK** :
- sage-leaved alangium (*aṅkolla*) Alangium  
salvifolium (Linn. f.) Wang. **gvdb** : 117
- sage-leaved alangium (*aṅkoṭa*) Alangium  
salvifolium, (L. f.) Wang. See **avs**; cf.  
**NK** :
- sal (*śālasāra*) → ?? (*śāla*) :
- sal group of trees (*śālasārādi*) *śālasārādi* is a  
group (*gaṇa*) of twenty-three trees  
listed at 1.38.8–9 (**Su** 1938: 165),  
**josi-maha** : 66
- sal tree (*śālā*) Shorea robusta, Gaertn.f. See  
**avs** : 174
- sandalwood (*bhadraśriya*) Santalum  
album Linn. See **white sandalwood**  
(*bhadraśrī*) : 96
- sandalwood (*candana*) Santalum album, L.  
See **adps**, **NK** : 66, 96, 98, 136, 162, 294
- sappan wood (*pataṅga*) Caesalpinia  
sappan, L. See **avs**, **avs** :
- sappanwood (*pattāṅga*) Also *pattāṅga*.

- Caesalpinia sappan, L. **avs, imp, gvdb** : 46
- scaly, red-streaked fish (*cilicima*) An unidentified fish that is absolutely not to be eaten with milk. Described in Bhela (1.12.7), Caraka (1.26.83) and Suśruta (1.20.8, 13). Circular, red streaks, round eyes and prominent scales, and "normally goes on land." : scarlet mallow (*bandhujīva*) Pentapetes phoenicea, L. **NK, gvdb** : 119
- scented pavonia (*bālaka*) Pavonia odorata, Willd. See **adps, NK** : 136
- scented pavonia (*toya*) → *bālaka*? Pavonia odorata, Willd. **adps, NK** :
- scramberry (*tālīśa*) **gvdb** discusses the several identifications and regional differences in identifying this plant. *Taxus baccata* Linn. is a common candidate, as is *Flacourtia jangomas* (Lour.) Raeusch. (scramberry) : 96, 175
- scutch grass (*dūrvā*) *Cynodon dactylon* (Linn.) Pers. (**gvdb**) : 286
- selu plum (*śelu*) *Cordia myxa*, L. non Forssk. See **meul-plants** 1 (2), **IGP**, cf. **avs**; cf. **avs** (*C. dichotoma*, Forst.f.), **NK** (*C. latifolia*, Roxb.) : 97, 134
- sesame (*tila*) *Sesamum indicum* L. **gvdb** : 45, 162
- sesame oil (*taila*) *Sesamum indicum* L. **gvdb** : 45, 162
- sheep (*urabhra*) *Ovis orientalis*, Gmelin?. See BIA 249 :
- silk-cotton tree (*śālmālī*) *Bombax malabarica*. See **issa-1994** :
- siris (*śirīśa*) *Albizia lebbeck*, Benth. See **avs, NK, gvdb**. Cf. **white siris** : 134, 162, 174, 294
- siris seeds (*śirīśamāśaka*) *Albizia lebbeck*, Benth. See **avs, NK** : 117
- small-flowered crape myrtle (*sidhraka*) *Lagerstroemia parviflora* Roxb. See **gvdb** : 140
- 'snake mallow' (*mahābalā*) → *sahadevā*. *Sida spinosa*, L. See **NK, adps**, Index Kewensis :
- 'snake-killer' (*sarpaghāti*) unknown. See ? : snakeroot (*sugandhā*) → *sarpagandhā* *Rauvolfia serpentina* Benth. ex. Kurz. See *sarpagandhā*. But may be *Aristolochia indica* Linn. Has been identified with *nākulī*, or *gandhanākulī*. See (**gvdb**) : 124
- snowball plant (*ajāśṛṅgī*) **gvdb** says that this is a common climber of Suśruta's *vallīpañcamūla* group (1.38.72 (**Su 1938**: 169)) and suggests that it may be *Saussurea gossypiphora*. If it is a synonym of *uttamāraṇī* it may be *Pergularia daemia* (Forssk.) Chiov. (trellis vine) (**gvdb**) :
- soda crystals (*suvarjikā*) Sodium carbonate. See **NK** :
- spiked ginger lily (*śaṭī*) *Hedychium spicatum* Sm. in A. Rees, **gvdb**. Also sometimes *śaṭhī* :
- spikenard (*jaṭāmāṃsī*) *Nardostachys jatamansi* DC **gvdb**, etc :
- spikenard (*māṃsī*) *Nardostachys grandiflora*, DC. See **NK** : 136
- spikenard (*nalada*) → *māṃsī*. *Nardostachys grandiflora*, DC. See **NK** : 115
- spiny bitter cucumber (*karkāruka*) *Momordica cochinchinensis* (Lour.) Spreng., (Thunb.) Cogn. See **avs, IGP** 754 (or *Beninkasa hispida*? **avs**; cf. **avs**) :
- strychnine tree (*viśamuṣṭika*) *Strychnos nux vomica* Linn. **gvdb** : 290
- sugar (*sitā*) *Dalhana* makes this equation at 1.37.25 (**Su 1938**: 162) : 136
- sugar (*śarkara*) *Saccharum officinarum*, Linn. **NK** : 121
- sugar cane (*ikṣu*) *Saccharum officinarum*, Linn. **NK** : 121
- sunflower (*sūryavallī*) → *ādityavallī*, *sūryamukhī*, *Helianthus annuus* Linn. **gvdb** : 134
- swan (*haṃsa*) *haṃsa*. ?. See ? :
- sweet flag (*vacā*) *Acorus calamus* Linn. See



- gvdb** : 95, 102  
sweet melon (*ervārūka*) *Cucumis melo*, L.  
See **avs**; **avs**, **IGP** 325–6, **NK** (C.  
momordica) :  
sweet plants (*madhuravarga*) The sweet  
plants are enumerated at  
*Suśrutasaṃhitā* 1.42.11. See also **gvdb** :  
45  
sweet-scented oleander (*aśvamāra*) *Nerium*  
oleander, L. See **adps**, **NK** :  
sweet-scented oleander (*aśvamāraka*)  
*Nerium oleander*, L. See **adps**, **NK** : 124  
teak (*śāka*) *Tectona grandis*, L.f. See **avs**,  
(**moni-sans**) :  
Tellicherry bark (*kuṭaja*) *Holarrhena*  
pubescens Wall. ex G.Don, with  
*Wrightia tinctoria* and *W. arborea*  
considered **gvdb**, **adps** : 92, 285  
ten roots (*daśamūla*) Described at  
*Suśrutasaṃhitā* 1.38.70–71 (**Su** 1938: 169)  
as a combination of the lesser five roots  
and the greater five roots : 284  
thorn apple (*karambha*) *Datura metel*, L.  
See **gvdb** for useful discussion. Also,  
**avs** (cf. *Abhidhānamāñjarī*), **NK**,  
**potter**, **adps**. Possibly the same plant as  
plumed cockscomb (*indīvara*) (**gvdb**) :  
125, 282, 290  
three heating spices (*tryūṣaṇa*) *śuṇṭhī*  
(Dried ginger) *Zingiber officinale*,  
Roscoe. **adps**, **NK**, **avs**, **IGP** 1232,  
pippalī (long pepper) *Piper longum*,  
L. **adps**, **NK**, and marica (black pepper)  
*Piper nigrum*, L. **adps**, **NK** : 67, 135  
three-leaf soapberry (*ariṣṭaka*) *Sapindus*  
trifoliatu s L. (**gvdb**) :  
three-leaved caper (*varuṇa*) *Crataeva*  
magna (Lour.) DC. See **avs**; cf. **NK** :  
120  
top layer of fermented liquor (*surāmaṇḍa*)  
**imp**, **NK**, **mchu-2021** : 43, 44  
tree cotton (*kārpāsa*) *G. arboreum* L. **adps**.  
Pace the identifications of **gvdb**, since  
*G. barbadense* L. is native to South  
America and *G. herbaceum* L. which is  
native to Africa : 42, 293  
tree cotton (*picu*) See tree cotton (*kārpāsa*) :  
44, 46  
turmeric (*gaūrī*) *Curcuma longa*, L. See  
**adps**, **avs**, **NK** : 96  
turmeric (*haridrā*) *Curcuma longa* Linn.  
**gvdb** : 97, 135, 141, 167  
turmeric (*rajanī*) *Curcuma longa*, L. **adps**,  
**avs**, **NK** : 28, 136  
turpeth (*trivṛt*) → *tṛvṛtā*. *Operculina*  
turpethum (Linn.) Silva Manso =  
*Ipomoea turpethum* R. Br. **gvdb** : 90,  
121, 167, 231, 282  
two kinds of salt (*vasukavasira*) See the  
discussion by **gvdb**, who note that  
when *vasuka* is mentioned together  
with *vasira*, two varieties of salt are  
often meant (see *vasukavasirā*) : 65  
unhusked rice (*śāli*) *Oriza sativa*, Linn.  
**gvdb** : 28, 291  
various kinds of honey (*madhuvarga*)  
*Suśrutasaṃhitā*'s eight categories of  
honey. See *Suśrutasaṃhitā* 1.45.132 and  
**duṭt-1922** :  
velvet bean (*svayamguptā*) *Mucuna*  
pruriens DC., **gvdb** :  
velvet-leaf (*pāṭhā*) *Cissampelos pariera*, L.  
See **adps**, **NK**, **meul-plants1**, **avs**; cf.  
**avs** : 36, 67, 88, 102, 134  
velvet-mite (*indragopa*) *Kerria lacca*  
(Kerr.). **lien-1978** : 116  
verbena (*bhārīgī*) → *phañjī*.  
*Clerodendrum serratum*, L. See **avs**,  
**adps** :  
verbena (*phañjī*) *Clerodendrum serratum*,  
L. See **avs**, **adps** : 119  
‘Virāṭa’s plant’ (*vairāṭaka*) unknown. See ? :  
watered buttermilk (*udaśvit*) **moni-sans** :  
116  
watermelon (*kāḷindaka*) *Citrullus lanatus*  
(Thunb.) Matsum & Nak. See **IGP**  
257, **NK**, **avs** :  
weaver’s beam tree (*muṣkaka*) *Schrebera*  
swietenoides, Roxb. See **avs**, Lord,  
**NK** : 92, 140

- weaver's beam tree (*viśalyā*) Schrebera swietenoides Roxb. ← *kuberākṣī*. **gvdb** notes that this name is a synonym for many other plants, including *lāṅgālī*, *indravāruṇi*, *guḍūcī* etc. Ḍalhaṇa identified it with *pāṭalā*, *kāṣṭhapāṭalā*, and *agniśikhā* tree, all of which may be called *śvetamokṣaka* or *kuberākṣī* : 167
- 'web-milk' (*jālakṣīri*) unknown. See ? : wheat (*godhūma*) *Triticum vulgare*, L. See **HK** :
- white babool (*arimeda*) *Acacia leucophloea*, (Roxb.) Willd. See **avs** : 36
- white calotropis (*alarka*) *Calotropis procera*, (Ait.) R. Br. See **NK, chopra, chop-1958** : 45
- white clitoria (*Xsitā*) Possibly → **white clitoria**? *Clitoria ternatea*, L. See **avs, NK** :
- white clitoria (*giryāhvā*) → *śvetā*. *Clitoria ternatea*, L. See **avs, NK** :
- white clitoria (*śvetā*) → *giryāhvā*. *Clitoria ternatea*, L. See **avs, NK** : 118, 294
- white cutch tree (*somavalka*) *Acacia polyacantha*, Willd. See **avs, IGP 7, meul-plants1, avs; pace NK** : 119, 140
- white dammer tree (*sarja*) *Vateria indica*, L. See **NK, avs, avs, chopra** : 36, 65
- white sandalwood (*bhadraśrī*) *Santalum album* Linn. see **sandalwood (candana) gvdb** and *Carakasamhitā* ci.4.102 (**Ca 1941**: 434) where it is contrasted with *lohitacandana* : 66, 292
- white siris (*kaṭabhī*) *Albizia procera* (Roxb.) Benth. or *A. lebbek* (Linn.) Benth. **gvdb, avs**. Cf. Cf. **siris** : 162, 292
- white siris (*kiṇihī*) *Albizia procera*, (Roxb.) Benth. See **gvdb 98, NK** : 135
- white teak (*kāśmarī*) → *kāśmarī* : 175
- white teak (*kāśmaryā*) → *kāśmarī* : 65
- white teak (*kāśmarī*) → *kāśmarya*, *kāśmarī*, *madhuparṇī*. *Gmelina arborea*, Roxb. See **meul-plants1, bole-1986, adps** : 96, 98, 285
- white teak (*madhuparṇī*) → *kāśmarī* : 65
- white water-lily (*kumuda*) *Nymphaea alba*, Linn. **gvdb** : 27
- wild asparagus (*bahuputrā*) → *nandana*? *Asparagus racemosus*, Willd. See further **wild asparagus (śatāvarī)** : 119
- wild asparagus (*śatāvarī*) *Asparagus racemosus*, Willd. See **adps, avs, NK, IGP, avs, dymock** : 94–96, 98, 180, 295
- wild celery (*agnika*) → may be *bhallātaka*, *lāṅgālī*, *ajamodā*, *moraṭa*, or *agnimantha*, **gvdb**. Uncertain A plant often cited in *Suśrutasaṃhitā*, but rarely in *Carakasamhitā* (**gvdb**). Ḍalhaṇa glossed it at 5.2.45 (**Su 1938**: 566) as *ajamodā* but noted that others consider it to be *moraṭa*. There is considerable complexity surrounding the identification of *moraṭa*/*mūrvā* itself and related synonyms (**gvdb**) : 134, 295
- wild celery (*ajamodā*) *Apium graveolens*, L. Sometimes identified with *agnika* (**wild celery**), q.v. : 134
- wild chinchona (*kādamba*) *Anthocephalus cadamba*, Miq. See **NK** :
- wild mustard (*saurīyaka*) *Cleome viscosa*, L.? (cf. Rā.4.144). See **avs, NK** :
- wild sugar cane (*kāṇḍekṣu*) *Saccharum spontaneum* L., **gvdb** : 65
- Withania (*aśvagandhā*) *Withania somnifera* (L.) Dunal. See **avs, dymock**., Chevallier 150 : 45, 91, 97
- wolfsbane (*vatsanābha*) *Aconitum napellus*, L. See **avs, NK, potter**. Or *Aconitum chasmanthum* Stapf ex Holmes, **gvdb** : 281
- wood apple (*kapittha*) *Limonia acidissima*, L. See **avs, NK** : 97, 118, 120, 174
- woodrose (*mūṣikakarnī*) *Jatopha curcas*, L. **avs, NK. gvdbadps** discuss this issue well : 118
- woodworm (*ghuṇa*) See **note to Atharvaveda 4.16** :
- yellow-berried nightshade (*kṣudrā*) *Solanum virginianum*, L. See **adps, NK, avs** : 135, 136

yellow-fruit nightshade (*kaṇṭhakārī*)  
Solanum virginianum L. (also called  
Solanthum xanthocarpum, Schrad. &

Wendl.) **gvdb**. A component of [lesser  
five roots](#) : 288

## Glossary

- √*pīḍ* - pain: 158  
 √*śodh* - purge: 163  
 √*ūh* - propelled: 158  
 yoga - cohesion: 229  
 'angry beetles' - *toṭaka*: 138  
 'bellied' - *kukṣita*: 139  
 'cook-fish' - *pākamatsya*: 138  
 'darts' - *śārikā*: 139  
 'earth scorpions' - *viśvambhara*: 139  
 'flat insects' - *piccitā*: 138  
 'lids' - *śāraṇa*: 139  
 'liquors' - *medaka*: 139  
 'orange-dwellers' - *kaśāyavāsika*: 138  
 'pepper snakes' - *saṣṣapaka*: 138  
 'poisonous snakes' - *pracalāka*: 138  
 'pot insects' - *kaunḍinya*: 138  
 'speckle-heads' - *citraśīrṣa*: 139  
 'wing-scorpions' - *patravṛścika*: 139  
 'wood-enemies' - *dārukāri*: 139  
  
 abdomen - *pakvāśa*: 88  
 abdominal lump - *gulma*: 192  
*abhayā* - chebulic myrobalan: 175  
*abhramukta* - free from clouds: 182  
*abhyāṅga* - massage oil: 114, 120 - oil  
     massage: 118 - oil rub: 88, 227  
*ācāra* - regimen: 15  
*ācārīka* - medical advice: 44  
 accents - *svara*: 162  
 accumulation - *samudāya*: 41 - *sañcaya*: 16  
*Aconite* - *hālāhala*: 130  
*ādarśamaṇḍala* - the mirror ring: 152  
*adhikaraṇa* - topic: 229f  
*adhimantha* - irritation: 183  
*adhiṣṭhāna* - base, foundation: 137  
     - carriers: 137 - located: 15  
*ādhmāna* - distension: 129 - tympanites:  
     60  
*ādhmāta* - swollen: 155  
*adhodṛṣṭitva* - downward vision: 183  
*adhyāya* - sections: 18  
 affliction - *upasarga*: 120  
 afterbirth - *aparā*: 105  
*agada* - antidote: 133, 162f - antitoxic: 162  
  
*āgantū* - external factors: 17  
 aggregation - *samuccaya*: 229, 235  
*agnika* - the flame: 152  
*agnikarma* - cauterization: 88  
*agra* - supernatant layer: 179  
*agramukta* - free from the point: 182  
*āhāra* - diet: 15  
*āhārya* - take away: 42  
*ahipatāka* - the snake flag: 153  
*ahorātra* - day and night: 16  
 aids - *aṅga*: 176  
 air - *saṁīraṇa*: 158  
*ajagara* - constrictor: 156 - the goat  
     swallower: 153  
*ajākṣīrārdita* - stirred with goat's milk:  
     184  
*ajeya* - invincible: 121 - "invincible": 136  
*akhiladehavyāptirūpam* - takes the form of  
     pervading the whole body: 131  
*akriya* - inactive: 60  
*ākṣepa* - contractions: 57  
*ākṣepaka* - convulsion: 58 - convulsions:  
     57  
*alagarda* - the hungry sting: 152  
*alagarddā* - sting-gush: 25  
*ālepa* - liniment: 174  
*ālepana* - liniments: 25, 120 - ointments:  
     88  
 alleviated - *yāpya*: 176  
 alleviation - *pratīkāra*: 16  
 along these lines - *evam*: 17  
*āmāśaya* - stomach: 132f  
*amṛta* - immortal: 121  
*anāgatāpekṣaṇa* - future reference: 229,  
     235  
*ānāha* - constipation: 129, 132, 136  
*aṇḍaja* - born from eggs: 16  
*aṇḍinī* - with testicles: 193  
*anekānta* - variable statement: 234  
     - variable statement: 229  
*aṅga* - aids: 176 - parts: 17  
*aṅgamarda* - bruising of the limbs: 132  
 anger - *krodha*: 15

- aṅgulirāji* - the finger stripe: 153  
*animals* - *paśu*: 16  
*añjana* - application of collyrium: 174, 179 - collyrium: 163f, 173–176, 178ff, 185 - eye make-up: 114, 119 - eye ointment: 120 - eye salve: 134 - stibnite: 179  
*annamada* - intoxication from food: 132  
*antarāyāma* - emprosthotonos: 58  
*antidote* - *agada*: 133, 162f  
*antitoxic* - *agada*: 162  
*antra* - entrails: 176 - gut: 133  
*ants* - *pipīlika*: 16  
*anulepana* - massage ointment: 114, 118 - ointment: 118  
*anumata* - consent: 229, 234  
*apadeśa* - statement of reason: 229, 233  
*apakṣāghāta* - paralysis: 58  
*apāṅga* - outer corner of the eye: 181  
*aparā* - afterbirth: 105  
*apatānaka* - spasmodic contraction: 57  
*āpatantraka* - spasmodic contradiction: 58  
*apavarga* - exception: 229, 234  
*apertures of the head* - *kha*: 119  
*aphorism* - *sūtra*: 230  
*application of collyrium* - *añjana*: 174, 179  
*apuṣpa* - the grass flower: 152  
*araga timira* - non-bloodshot blindness: 181  
*ardhakaṣṭhāpāṣaṇḍhika* - half door-hinge: 42  
*ardita* - spasm of the jaw-bones: 59  
*arid-land animals* - *jāṅgala*: 179  
*ariṣṭā* - bandage: 160f, 165f  
*ariṣṭa* - omens: 49  
*arṇavamala* - cuttle fish: 176  
*arocaka* - loss of appetite: 132  
*arśas* - prolapses: 192  
*ārtava* - menstrual blood: 192  
*arthāpatti* - *Implication*: 234  
*arthāpatti* - implication: 229  
*aruci* - disinterest in food: 165  
*asādhya* - incurable: 173 - untreatable: 181  
*āsaṅgima* - fastening: 42  
*āśoka* - grief: 15  
*āśrayin* - substrate: 15  
*asthi* - bones: 17  
*aṣṭhīlā* - pebble: 116  
*asūyā* - jealousy: 15  
*atibalā* - strong mallow: 177  
*atideśa* - prediction: 229, 233  
*atikrāntāpekṣaṇa* - past reference: 229, 235  
*ātmaka* - nature: 14  
*āṭopa* - flatulence: 117  
*atyānandā* - extremely excited: 193  
*avadāraṇa* - fissuring: 120  
*avalekhana* - combs: 114  
*avapīḍa* - sternutatory: 164  
*āvarta* - spiral: 181  
*avaśardhita* - fart: 138  
*axelwood* - *dhava*: 185  
*ayana* - half-year: 16  
*āyatta* - depends on: 15  
*āyur* - life: 24 - life, longevity: 11  
*āyurveda* - the science of life: 12  
*babhru* - the brown: 152  
*babhrūkuṭīmukha* - the brown hut mouth: 152  
*baddham* - bound, connected: 46  
*balā* - country mallow: 177  
*bala* - strength: 15  
*bali* - morsel: 114 - sacrificial offerings: 161  
*bandage* - *ariṣṭā*: 160f, 165f - *bandha*: 160  
*bandha* - bandage: 160  
*base, foundation* - *adhiṣṭhāna*: 137  
*bāṣpa* - vapour: 115f, 119  
*be exhausted* - *sāda*: 133  
*bearers* - *voḍhāra*: 114  
*beauty berry* - *priyaṅgu*: 179  
*bellyache* - *jaṭhara*: 136  
*bent brow and eye* - *vakrabhrūnetra*: 183  
*benumbed* - *jāḍya*: 157  
*beryl* - *vaiḍūrya*: 185  
*bhadradāru* - deodar: 184  
*bhakṣya* - masticable: 236  
*bhaṅga* - leaves: 182

*bhavet* - it may be: 181  
*bhāvita* - cooked: 179 - infused: 175  
*bheṣaja* - treatment: 193  
*bhojya* - edible: 236  
*bhramaraka* (drongo): 115  
*bhr̥ṅgarāja* (racket-tailed drongo): 115  
*bīja* - semen: 192  
*bile* - *pitta*: 177  
*bile-fever* - *pittajvara*: 166  
*bilious* / *choleric* - *pittalā*: 193  
*bindurāji* - the drop stripe: 153  
*black drongo* (*dhūmyāṭa*): 115  
*black* - *kṛṣṇā*: 25  
*black part* - *kṛṣṇa*: 181  
*black soot* - *maṣī*: 174  
*blindness* - *timira*: 180  
*blink of the eye* - *nimeṣa*: 16  
*blockage of the vision* (*dr̥ṣṭyavarodha*): 156  
*blood* - *rudhira*: 16 - *śonita*: 177  
*blood-bile* - *raktapitta*: 173  
*blood-bile* - *śonita-pitta*, *rakta-pitta*: 177  
*blood-letting* - *sirāvedha*: 174  
*bloodshot blindness* - *rāgin timira*: 178  
     - *rāgiṇi timire*: 181  
*blue dot cataract* - *mlāyīn*: 180  
*blue vitriol* - *tuttha*: 179  
*bodily constituents* - *dhātu*: 131  
*bodily tissues* - *dhātu*: 157  
*body language* - *iṅgita*: 114  
*body tissue* - *dhātu*: 133  
*bones* - *asthi*: 17  
*born from eggs* - *aṇḍaja*: 16  
*born in in a caul* - *jarāyujā*: 16  
*born of sweat* - *svedaaja*: 16  
*bound, connected* - *baddham*: 46  
*box myrtle* - *kaṭṭphala*: 176  
*brahma* - holiness: 161  
*brahmar̥ṣi* - holy sages: 161  
*bristles* - *śūka*: 138  
*bṛṇhaṇa* - nourishment: 15  
*bruising of the limbs* - *aṅgamarda*: 132  
*bubbling* - *budbuda*: 183  
*budbuda* - bubbling: 183  
*bulbs* - *kanda*: 16

*bull* (*vṛṣabha*): 115  
*burning sensation in feet* - *pādadaḥa*: 60  
*cakradhārā* - rim of a wheel: 43  
*cakra* - the ringed: 153  
*cala* - liquid: 182  
*can be mitigated* - *yāpya*: 181  
*caraṇī* - *caraṇī*: 193  
*caraṇī* - *caraṇī*: 193  
*cardamom* - *elā*: 176  
*carman* - pelt: 16  
*carmānta* - leather: 160  
*carnivore* - *kravyabhuj*: 177  
*carriers* - *adhiṣṭhāna*: 137  
*cassia cinnamon* - *patra*: 184  
*castor oil* - *pañcāṅgulataila*: 177  
*cāsyāt* (from his mouth): 116  
*cataract* - *liṅganāśa*: 181  
*caturvarga* - fourfold grouping: 17  
*catuṣṭaya* - four factors: 17  
*caused by wind* - *pavanodbhava*: 177  
*causes* - *hetu*: 193  
*causing a fall* - *sraṃsanī*: 193  
*causing the destruction of actions such as moving* - *gamanādikriyāvināśakārī*: 183  
*cauterization* - *agnikarma*: 88  
*chebulic myrobalan* - *abhayā*: 175  
*chedya* - excision: 17  
*cheek-ear* - *gaṇḍakarna*: 42  
*chest* - *hr̥d*: 133  
*chidra* - opening: 181  
*child bearing* - *kaumārabhṛtya*: 188  
*child-murderess* - *putraghnī*: 193  
*chinna* - segmented: 25  
*chital deer* (*pr̥ṣata*): 115  
*choler* - *pitta*: 193  
*chyle* - *rasa*: 132  
*chyle* - *rasa*: 31  
*cihna* - signs: 193  
*circuit of the pupil* - *dr̥ṣṭimaṇḍala*: 182  
*citraka* - the mark: 153  
*citraśīrṣa* - 'speckle-heads': 139  
*citron* - *mātulūṅga*: 184  
*clean* - *pra√sādh*: 120  
*cloth* - *plota*: 160



- clusters - *samplava*: 16  
 cock - *tāmracūḍa*: 178  
 cohesion - *yoga*: 230  
 cohesion - *yoga*: 229  
 collection - *varga*: 17  
 collyrium - *añjana*: 163f, 173–176, 178ff, 185  
 combined - *upahita*: 176  
 combs - *avalekhana*: 114  
 comfort - *sukha*: 17  
 compendium of diseases - *rogasaṃgraha*: 190  
 complexion - *varṇa*: 15, 49  
 compounds - *yoga*: 174  
 compressed - *saṃkṣipta*: 42  
 compressed - *saṃkṣipta*: 43  
 compulsion - *niyoga*: 229, 235  
 conch - *salilotthita*: 180  
 cone snails - *śambūka*: 138  
 congested humours - *sannipāta*: 17  
 consent - *anumata*: 229, 234  
 constipation - *ānāha*: 129, 132, 136  
 constitution - *prakṛti*: 165  
 constrictor - *ajagara*: 156  
 contamination dropsy - *duṣyodara*: 132  
 contractions - *ākṣepa*: 57  
 contraposition - *viparyaya*: 229, 234  
 convulsion - *ākṣepaka*: 58  
 convulsions - *ākṣepaka*: 57  
 cooked barley - *yavaudana*: 180  
 cooked - *bhāvita*: 179 - *siddham*: 224  
 copper - *tāmra*: 183  
 coral - *vidrūma*: 185  
 coṣa - driness: 183  
 cottony jujube - *kākolī*: 184  
 counteraction - *pratiśedha*: 173  
 country mallow - *balā*: 177  
 cow snout - *gonasa*: 154  
 cow's flesh - *gomāṃsa*: 174  
 cow's urine - *gomūtra*: 176  
 cow-dung - *gośakṛt*: 175  
 cow-praising - *govandanā*: 25  
 crabs - *uccīṭiṅga*: 139  
 creeper-ear - *vallīkarṇa*: 42  
 creepy-crawlies - *sarīsrpa*: 13, 16  
 crow's foot - *kākapada*: 134  
 crow's lip - *kākauṣṭha*: 42  
 cuñcumālaka - little ring of spots: 150  
 curable - *sādhya*: 173  
 curds - *dadhi*: 117, 121  
 cure - *siddhi*: 134  
 cured - *sādhya*: 136  
 cuscus grass - *uśīra*: 179  
 cutting with a blade - *śastrakṣata*: 174  
 cuttle fish - *aṇṇavamala*: 176  
 cuttlefish bone - *phena*: 185  
     - *samudraphena*: 175f  
 dadhi - curds: 117, 121  
 dadhimukha - the curd mouth: 152  
 dāha - overheating: 173  
 dainya - misery: 15  
 dais - *pīṭha*: 42  
 daivakṛte - naturally-occurring: 181  
 dantamāṃsa (gum): 117  
 dantaveṣṭa (tooth socket): 117  
 darbhapuṣpa - the grass flower: 153  
 darita - torn: 149f  
 dark colour - *dhyāma*: 130  
 dart-mouth - *śaṅkumukhī*: 25  
 dārukāri - 'wood-enemies': 139  
 datta (given): 115  
 day and night - *ahorātra*: 16  
 deadly substance - *kālakalpa*: 158  
 decoction - *kvātha*: 134  
 decoctions - *kaṣāya*: 114, 182  
 deducible - *ūhya*: 229, 236  
 deer - *eṇa*: 177  
 defects - *doṣa*: 192  
 deity - *devatā*: 161  
 delirium - *moha*: 128  
 demons - *graha*: 188  
 demons - *graha*: 188  
 deodar - *bhadradāru*: 184  
 depends on - *āyatta*: 15  
 depression - *viṣāda*: 15  
 description - *nirdeśa*: 229, 233  
 desert date - *īṅgudī*: 179  
 desire - *icchā*: 15  
 determination - *nirṇaya*: 229  
 devadinna - the gift of god: 152

- devatā* - deity: 161  
*dhātrī* - emblic: 176  
*dhātu* - bodily constituents: 131 - bodily tissues: 157 - body tissue: 133 - element: 124, 127, 129  
*dhava* - axelwood: 185  
*dhūma* - inhaled smoke: 114  
*dhūmadarśin* - seeing smoke: 173  
*dhūmyāṭa* (black drongo): 115  
*dhyāma* - dark colour: 130 - grimy: 114  
 diet - *āhāra*: 15  
*digdha* - poisoned: 166  
 dilator - *pravardhanaka*: 41  
*dīpyaka* - the stimulator: 153  
 discharge - *praseka*: 130 - *srāva*: 118, 120  
 disease - *vyadhi*: 17  
 diseases - *roga*: 192  
 disinterest in food - *aruci*: 165  
 disjunction - *viśleṣa*: 132  
 disorders of the female reproductive system - *yonivyāpat*: 192  
 distension - *ādhmāna*: 129  
 door-hinge - *kapāṭasandhika*: 42  
*doṣa* - defects: 192 - humour: 131, 181, 230 - humours: 16 - humours: 192  
*doṣapariplava* - unsteadiness of the humours: 183  
 double - *yamalā*: 117  
 doubt - *saṁśaya*: 229, 235  
 downward vision - *adhodṛṣṭitva*: 183  
*drākṣā* - grapes: 184  
*dravāñjana* - liquid collyrium: 178  
*dravya* - liquid: 167 - substance: 49  
 dried flesh - *vallūraka*: 42  
 dried ginger - *nāgara*: 175  
 driness - *coṣa*: 183  
 drinkable - *peya*: 236  
 drongo (*bhramaraka*): 115  
*drṣṭi* - pupil: 173, 182  
*drṣṭimaṇḍala* - circuit of the pupil: 182  
*drṣṭivibhrama* - faulty vision: 119  
*drṣṭyavarodha* (blockage of the vision): 156  
 dry rub - *utsādana*: 118  
 dry rubs - *utsādana*: 114  
 dry - *rūkṣa*: 131  
 duct - *sirā*: 162  
 ducts - *sirā*: 17, 88 - *srotas*: 155  
*duḥkha* - suffering: 15  
 dumb - *mūka*: 60  
 dung beetles - *varcaḥkīṭa*: 138  
*dūrva* - panic grass: 184  
*dūṣī-viṣa* - slow-acting poison: 133  
*dūṣīviṣa* - slow poisoning: 163  
 - slow-acting poison: 136  
*dūṣīviṣāri* - enemy of slow-acting poison: 136 - slow-acting poison antidote: 117  
*duṣyodara* - contamination dropsy: 132  
*dveṣa* - hatred: 15  
*dvyāhika* - the two-day: 153  
*dvyāṅgulirāji* - the two finger stripe: 153  
 dwindling away - *kṣaya*: 132  
 ear-ache - *karṇaśūla*: 60  
 earth - *pāṁśu*: 160  
 earth products - *pārthiva*: 16  
 earthen products - *pārthiva*: 17  
 edible - *bhojya*: 236  
*ekāṅgaroga* - monoplegia: 58  
*ekānta* - invariable statement: 229  
 - invariable statement: 234  
*elā* - cardamom: 176  
 element - *dhātu*: 124, 127, 129  
 elephant/snake - *nāga*: 139  
 elixir salve - *rasāñjana*: 175, 178f  
 elixir-salve - *rasāñjana*: 175  
 elixir-salve - *śīta*: 175  
 ellipsis - *vākyāśeṣa*: 229  
 ellipsis - *vākyāśeṣa*: 234  
 embelia - *vidāṅga*: 179  
 emblic - *dhātrī*: 176  
 emprosthotonos - *antarāyāma*: 58  
*eṇa* - deer: 177  
 enclosed roasting - *puṭākhyā*: 177  
 - *puṭapāka*: 179  
 ends - *vaktra*: 183  
 enemy of slow-acting poison - *dūṣīviṣāri*: 136  
 energy - *ojas*: 49  
*eṇipada* - the deer foot: 153



- entrails - *antra*: 176  
 envy - *īrṣyā*: 15  
 errhine - *nasya*: 177  
 errhines - *nasya*: 120  
 essence - *sāra*: 16  
*evam* - along these lines: 17  
 exception - *apavarga*: 229, 234  
 excision - *chedya*: 17  
 expansive - *vikāsin*: 131  
 explication - *vyākhyāna*: 229, 235  
 expressed juice - *svarasa*: 174  
 extensive meaning of the collection of statements (*vāksamūhārthavistāra*): 154  
 external factors - *āgantū*: 17  
 extract - *niryāsa*: 120  
 extract of rohu carp - *rauhita*: 175  
 extracted juice - *svarasa*: 119  
 extracts - *rasa*: 179  
 extremely excited - *atyānandā*: 193  
 eye make-up - *añjana*: 114, 119  
 eye ointment - *añjana*: 120  
 eye salve - *añjana*: 134  
 eyewash - *tarpaṇa*: 120, 174, 178f  
  
 fainting - *mūrcchā*: 166  
 fart - *avaśardhita*: 138  
 fastening - *āsaṅgima*: 42  
 fat - *vasā*: 178  
 faulty medical treatment - *mithyopacāra*: 192  
 faulty vision - *dṛṣṭivibhrama*: 119  
 feeling of heat all over - *paridāha*: 157  
 female reproductive organ - *yoni*: 192f  
 female reproductive system - *yoni*: 192  
 field-specific term - *svasaṃjñā*: 235  
 field-specific term - *svasaṃjñā*: 229  
 filaments - *kiñjalka*: 175  
 first point of view - *pūrvapakṣa*: 234  
 fissuring - *avadāraṇa*: 120  
 flame of the forest - *palāśa*: 179  
 flatulence - *āṭopa*: 117  
 flavour - *rasa*: 230  
 flavours - *rasa*: 15, 49  
 flesh - *māṃsa*: 17  
 flooded - *pariplutā*: 193  
  
 flowering trees - *vrkṣa*: 15  
 flowers - *puṣpa*: 16  
 follicles - *kha*: 118  
 formulation - *yoga*: 87  
 fortnight - *pakṣa*: 16  
 four factors - *catuṣṭaya*: 17  
 fourfold grouping - *caturvarga*: 17  
 free from clouds - *abhramukta*: 182  
 free from the point - *agramukta*: 182  
 frogs - *maṇḍūkā*: 16  
 from his mouth (*cāsyāt*): 116  
 fruit trees - *vanaspati*: 15  
 fruits - *phala*: 16  
 future reference - *anāgatāpekṣaṇa*: 229, 235  
  
*gadgad* - stammers: 60  
*gāḍha* - pinched: 44  
*gairika* - ochre: 174f  
*gairikaḥ* - red chalk: 184  
*gamanādikriyāvināśakarī* - causing the destruction of actions such as moving: 183  
*gaṇḍakārṇa* - cheek-ear: 42  
 garlands - *sraj*: 114  
 gauze - *plota*: 44  
*gavedhuka* - the gavedhuka: 152  
 geckos - *grhagoḍikā*: 138  
 general rule - *paribhāṣā*: 179  
 gently - *mṛdu*: 184  
 ghee - *sarpīṣ*: 121 - *sarpīṣ*: 174  
*girisarpa* - the mountain snake: 152  
 given (*datta*): 115  
 giving of fumes (*paridhūpāyana*): 155  
 giving off fumes (*paridhūpana*): 155  
 glassy opacity - *kāca*: 179  
*godhā* - monitor lizard: 176  
 gold - *śātakumbhī*: 183  
*gomāṃsa* - cow's flesh: 174  
*gomūtra* - cow's urine: 176  
*gonasa* - cow snout: 154  
*gośakṛt* - cow-dung: 175 - juice of cow-dung: 175  
*govandanā* - cow-praising: 25  
*graha* - demons: 188 - demons: 188  
*grahanī* (seat of fire in the gut): 156

*grahaṇī* - seat of fire in the gut: 156  
*granthi* - knots: 130 - lumps: 118, 129  
 grapes - *drākṣā*: 184  
*gṛdhrasī* - sciatica: 59  
 great aconite - *mahāviṣa*: 130  
 great antidote - *mahāgāda*: 25  
 great fragrance - *mahāsugandha*: 120  
 great poison - *mahāviṣa*: 130  
 greed - *lobha*: 15  
 green vitriol - *kāśīsa*: 179  
*gṛhadhūma* - soot: 143  
*gṛhagoḍikā* - geckos: 138  
 grief - *āśoka*: 15  
 grimy - *dhyāma*: 114  
 gruel - *yavāgū*: 134, 163  
*guḍikā* - pill: 175  
*guḷma* - abdominal lump: 192  
 gum (*dantamāmsa*): 117  
*guṇa* - qualities: 131  
 gut - *antra*: 133  
  
 haemorrhaging - *śonitāgamana*: 155  
*hālāhala* - Aconite: 130  
 half door-hinge - *ardhakapāṭasandhika*: 42  
 half-year - *ayana*: 16  
 hare foot uraria - *pr̥thakparṇī*: 184  
*hareṇu* - hareṇu: 175f  
*hareṇu* - hareṇu: 175f  
*hari* - sun: 182  
*haridrā* - turmeric: 179  
*harṣa* - horripilation: 132  
 - overexcitement: 15  
*hastābharaṇaka* - the hand decoration:  
 153  
 hatred - *dveṣa*: 15  
 herbs - *oṣadhi*: 15  
*hetu* - causes: 193  
*hetvartha* - premise: 229 - the sense of the  
 cause: 233  
 himalayan cherry - *padmaka*: 184  
*hīnakarṇa* - reduced-ear: 42  
 hoarseness - *pāruṣya*: 129  
 holiness - *brahma*: 161  
 holostemma - *payasyā*: 184  
 holy sages - *brahmaṛṣi*: 161  
 honey collyrium - *kṣaudrāñjana*: 176

honey - *kṣaudra*: 174f - *madhu*: 174  
 - *madhus*: 115  
 horripilation - *harṣa*: 132  
 horseradish tree - *śigru*: 180  
 hot all over (*samantatastāpaḥ*): 155  
 hot over the whole body  
 (*sarvāṅgasantāpaḥ*): 155  
*hṛd* - chest: 133  
 huge - *mahatī*: 193  
 human being - *puruṣa*: 14f, 17  
 humour - *doṣa*: 131, 181, 230  
 humours - *doṣa*: 16  
 humours - *doṣa*: 192  
  
*icchā* - desire: 15  
 if, then not - *na ced*: 181  
*ilikinī* - the ilikinī: 153  
 illness - *ruj*: 175  
 illustration - *nidarśana*: 229, 235  
 immortal - *amṛta*: 121  
 implication - *arthāpatti*: 229  
*Implication* - *arthāpatti*: 234  
 impotent - *śaṇḍhī*: 193  
 in those cases - *tatra*: 176  
 in yama's direction - *yāmya*: 143  
 inactive - *akriya*: 60  
 incised - *pracchāna*: 165 - *pracchita*: 166  
 incising - *pracchāna*: 162  
 incurable - *asādhya*: 173  
 indian madder - *mañjiṣṭhā*: 184  
 indian sarsaparilla - *kālānusāriva*: 175  
 - *śārivā*: 184 - *sāriva*: 175 - *śārivā*: 184  
 indication - *pradeśa*: 229, 233  
 indigo - *nīlī*: 117  
*indragopa* - red velvet mites: 16  
*indrāyudhā* - rainbow: 25  
 infertile - *vandhyā*: 193  
 inflamed - *saṃrambha*: 44 - *vidagdha*: 174  
 infused - *bhāvita*: 175  
*inḡita* - body language: 114  
*inḡudī* - desert date: 179  
 inhaled smoke - *dhūma*: 114  
 inherent factors - *svabhāva*: 17  
 inherent - *svābhāvika*: 15  
 injured - *utpīḍita*: 181  
 inspissation - *rasakriyā*: 179

- intended - *vyākhyāta*: 17  
 interpretation - *nirvacana*: 229, 235  
 interstitial layers - *kalā*: 157  
 intestines - *pakvādhāna*: 133 - *pakvāśaya*: 116, 132  
 intoxication from food - *annamada*: 132  
 invariable statement - *ekānta*: 229  
 invariable statement - *ekānta*: 234  
 invincible - *ajeya*: 121  
 irregularities - *vaiṣamya*: 15  
 irrigated - *pratipūraṇa*: 119  
 irrigation - *seka*: 174 - *tarpaṇa*: 192  
 irritation - *adhimantha*: 183 - *prakopa*: 16  
*īrṣyā* - envy: 15  
 it may be - *bhavet*: 181  
 itemization - *vidhāna*: 235  
 itemization - *vidhāna*: 229  
 items created by time - *kālakṛta*: 16f  
  
*jāḍya* - benumbed: 157  
*jāḍyatā* - rigidity: 165  
*jala* - water: 24  
*jalaukas* - water-dwellers: 24  
*jāṅgala* - arid-land animals: 179  
*jaṅgama* - mobile: 124 - moving: 15, 17  
*japa* - mantra repetition: 161  
*jarāyuja* - born in in a caul: 16  
*jaṭhara* - bellyache: 136  
*jātī* - royal jasmine: 185  
 jealousy - *asūyā*: 15  
 joints - *sandhi*: 17  
 juice extract - *svarasa*: 16  
 juice of cow-dung - *gośakṛt*: 175  
 juices - *rasa*: 178  
*jyotīratha* - the chariot of light: 153  
  
*kāca* - glassy opacity: 179  
*kākapada* - crow's foot: 134  
*kākauṣṭha* - crow's lip: 42  
*kākolī* - cottony jujube: 184  
*kalā* - interstitial layers: 157 - layer: 147  
 - layers of skin: 158 - minutes: 16  
*kālakalpa* - deadly substance: 158  
*kālakṛta* - items created by time: 16f  
*kālānusāriṇa* - indian sarsaparilla: 175  
*kalāyakhañja* - lathyrism: 59  
  
*kalka* - mash: 136  
*kalpa* - procedure: 147, 160 - rule: 137  
*kāma* - lust: 15  
*kaṇabha* - wasps: 139  
*kanda* - bulbs: 16  
*kaṇṭaka* - spots: 119  
*kapālacūrṇa* - powdered earthenware  
 crockery: 43  
*kapāṭasandhika* - door-hinge: 42  
*kapha* - mucus: 119 - phlegm: 129, 132f, 156, 193  
*kapilā* - tawny: 25  
*kapittha* (wood apple): 174  
*karburā* - mottled: 25  
*kardama* - the mud: 153  
*karma* - regimen: 182  
*karman* - therapies: 17  
*karṇaśūla* - ear-ache: 60  
*karṇavyadha* - piercing the ear: 39  
*karṇinī* - protuberant: 193  
*kaṣāya* - decoctions: 114, 182 - the ochre: 152  
*kaṣāyavāsika* - 'orange-dwellers': 138  
*kāśīpati* - lord of kāśī: 113  
*kāśīsa* - green vitriol: 179  
*kāṣṭhā* - trice: 16  
*kaṭphala* - box myrtle: 176  
*kaumārabhṛtya* - child bearing: 188  
*kaunḍinya* - 'pot insects': 138  
*kavala* - mouthwash: 118  
*kevala* - simply: 164  
*kha* - apertures of the head: 119  
 - follicles: 118  
*khaluṣa* - the khaluṣa: 153  
*khaṇḍaphaṇa* - the break hood: 152  
*khañja* - limpness: 59  
*khara* - rough: 183  
*kikkisāda* - the worm eater: 153  
*kinihī* - white siris: 179  
*kiñjalka* - filaments: 175  
 kitchen - *mahānasa*: 113  
*kiṭipa* - lice: 138  
 knots - *granthi*: 130  
 knowledge - *veda*: 11, 227  
 kohl - *srotas*: 178 - *srotoja*: 175, 185

*koṣṭha* - trunk of the body: 156  
*koṣṭukaśīrṣa* - synovitis of knee joint: 59  
*koṭha* - skin disease: 132  
*kravyabhuj* - carnivore: 177  
*kṛcchra* - with difficulty: 181  
*kriyā* - procedures: 14, 17 - treatment: 17, 179  
*kriyākāla* - the time for therapies: 17  
*kriyāsaṅga* - loss of function: 183  
*kṛmi* - worms: 16  
*krodha* - anger: 15  
*kṛṣṇā* - black: 25  
*kṛṣṇa* - black part: 181  
*kṛṣṇā* - long pepper: 174  
*kṛṣṇasarpa* - the black snake: 152  
*kṛṣṇodara* - the black belly: 152  
*kṣaṇadāndhya* - night blindness: 175  
*kṣāraka* - lye: 178  
*kṣaudra* - honey: 174f  
*kṣaudrāñjana* - honey collyrium: 176  
*kṣaya* - dwindling away: 132  
*kṣīṇa* - wasted: 44  
*kṣīra* - milky sap: 124, 127, 129 - sap: 16  
*kṣīrikāpuṣpa* - the milk flower: 153  
*kukṣita* - 'bellied': 139  
*kūkuṭa* - the kūkuṭa: 152  
*kunta* - small insects: 16  
*kupyaka* - metal: 174  
*kuśa* grass - *kuśa*: 178  
*kuśa* - kuśa grass: 178  
*kuṣṭha* - pallid skin disease: 133  
*kvātha* - decoction: 134  
  
*lac* - *lākṣā*: 184  
*lākṣā* - lac: 184  
*lame* - *paṅgu*: 59  
*lathyrism* - *kalāyakhāñja*: 59  
*layer* - *kalā*: 147 - *paṭala*: 181  
*layers of skin* - *kalā*: 158  
*leather* - *carmānta*: 160  
*leaves* - *bhaṅga*: 182 - *patra*: 16  
*lehya* - suckable: 236  
*lekhana* - scarification: 15  
*lice* - *kiṭīpa*: 138  
*life* - *āyur*: 24  
*life, longevity* - *āyur*: 11

*limpid* - *viśada*: 131  
*limpness* - *khañja*: 59  
*liṅga* - symptom: 119 - symptoms: 132  
*liṅganāśa* - cataract: 181  
*liniment* - *ālepa*: 174  
*liniments* - *ālepana*: 25, 120  
*liquid* - *cala*: 182  
*liquid collyrium* - *dravāñjana*: 178  
*liquid* - *dravya*: 167  
*liquorice* - *madhukair*: 184  
*little ring of spots* - *cuñcumālaka*: 150  
*liver extract* - *yakṛdrasa*: 175  
*liver* - *yakṛt*: 176  
*lobha* - greed: 15  
*located* - *adhiṣṭhāna*: 15  
*located on the limb* - *śākhāśrayā*: 162  
*lodh tree* - *lodhra*: 179  
*lodhra* - lodh tree: 179  
*logical methods of the system*  
   - *tantrayukti*: 229  
*lohitākṣa* - the red eye: 152f  
*long pepper* - *kṛṣṇā*: 174 - *māgadha*: 179  
   - *māgadhi*: 178 - *māgadhi*: 176  
   - *māgadhi*: 176  
*loose stool* - *viḍbheda*: 129, 140  
*lord of kāśī* - *kāśīpati*: 113  
*loss of appetite* - *arocaka*: 132  
*loss of function* - *kriyāsaṅga*: 183  
*lotus-mouth* - *puṇḍarikamukhī*: 26  
*lotus-splittable* - *utpalabhedyaka*: 42  
*lotus-spots* - *padminīkaṇṭaka*: 119  
*lumps* - *granthi*: 118, 129  
*lust* - *kāma*: 15  
*lūtā* - spiders: 13  
*lye* - *kṣāraka*: 178  
  
*madanaka* - the intoxicator: 152  
*madhu* - honey: 174 - mead: 161  
*madhūka* - mahua: 178ff  
*madhukair* - liquorice: 184  
*madhus* - honey: 115  
*madirā* - spirits: 176  
*madira* - spirits: 179  
*māgadha* - long pepper: 179  
*māgadhi* - long pepper: 178  
*māgadhi* - long pepper: 176

- māgadhī* - long pepper: 176  
*mahāgada* - great antidote: 25  
*mahākapota* - the big pigeon: 152  
*mahākṣṇa* - the big black: 152  
*mahānasa* - kitchen: 113  
*mahāpadma* - the great lotus: 152  
*mahāpanasaka* - the big jackfruit: 152  
*mahāsarpa* - the great snake: 152  
*mahāśīrṣa* - the big head: 152  
*mahāsugandha* - great fragrance: 120  
*mahatī* - huge: 193  
*mahāviṣa* - great aconite: 130 - great poison: 130  
*mahua* - *madhūka*: 178ff  
*mākuli* - *mākuli*: 154  
*mākuli* - *mākuli*: 154  
*mākuli* - *mākuli*: 154  
*malice* - *mātsarya*: 15  
*māṃsa* - flesh: 17  
*māṃsanirgama* - prolapse: 183  
*manahśilā* - realgar: 175, 178f, 185 - red arsenic: 174f  
*mānasa* - mental: 15  
*maṇḍala* - round blotches: 132  
*maṇḍūka* - frogs: 16  
*mañjiṣṭhā* - indian madder: 184  
*mantra repetition* - *japa*: 161  
*manual agitation* - *pāṇimantha*: 88  
*manyāstambha* - stiffness of the neck: 157  
*manyāsthambha* - rigidity of neck: 59  
*mardana* - rubbing: 88  
*markaṭa* - *monkey*: 130  
*marks with a knife* - *śastrapada*: 28  
*māsa* - month: 16  
*mash* - *kalka*: 136  
*maṣī* - black soot: 174  
*massage oil* - *abhyāṅga*: 114, 120  
*massage ointment* - *anulepana*: 114, 118  
*masticable* - *bhakṣya*: 236  
*mātsarya* - malice: 15  
*mātuluṅga* - citron: 184  
*matured* - *vipakva*: 174  
*mead* - *madhu*: 161  
*meaning of the words* - *padārtha*: 230  
*medaka* - 'liquors': 139  
*medical advice* - *ācārika*: 44  
*medicines cooked in a crucible* - *puṭapāka*: 174  
*men* - *nara*: 138  
*menstrual blood* - *ārtava*: 192  
*mental* - *mānasa*: 15  
*mention* - *samuddēśa*: 229, 233  
*meṣaśṛṅga* - periploca of the woods: 185  
*meṣaviṣāṇa* - periploca of the woods: 177  
*metal* - *kupyaka*: 174  
*metamorphopsia* - *viparītadarśana*: 155  
*milk* - *payas*: 121  
*milky sap* - *kṣīra*: 124, 127, 129  
*mimmira* - mumbles: 60  
*minutes* - *kalā*: 16  
*misery* - *dainya*: 15  
*miśrakacikitsa* - various treatments: 45  
*misshapen eyeball* - *vilocana*: 183  
*mithuna* - pair: 235 - triad: 235  
*mithyopacāra* - faulty medical treatment: 192  
*mitigatable* - *yāpya*: 173  
*mlāyin* - blue dot cataract: 180  
*mobile* - *jaṅgama*: 124  
*moha* - delirium: 128  
*monitor lizard* - *godhā*: 176  
*monkey* - *markaṭa*: 130  
*monkey* - *vānara*: 138  
*monoplegia* - *ekāṅgaroga*: 58  
*month* - *māsa*: 16  
*morsel* - *bali*: 114  
*mottled* - *karburā*: 25  
*mouse* - *mūṣikā*: 26  
*mouthwash* - *kavala*: 118  
*moving* - *jaṅgama*: 15, 17  
*mṛdu* - gently: 184  
*mucous* - *śleṣman*: 156  
*mucus* - *kapha*: 119  
*muhūrta* - three-quarters of an hour: 16  
*mūka* - dumb: 60  
*mukhasaṃdamśā* - nipping with the mouth: 138  
*muktā* - pearl: 181  
*muktvā* - separate: 181  
*mūla* - root: 15 - roots: 16

mūlaka - mūlaka: 130  
 mūlaka - mūlaka: 130  
 multi-joins - *vyāyojima*: 42  
 mumbles - *mimmira*: 60  
 mūrccā - fainting: 166 - stupor: 116  
 mūṣikā - mouse: 26  
 mūṣika - rodents: 13  
 mustā - nutgrass: 184  
 mustaka - mustaka: 130  
 mustaka - mustaka: 130  
  
 na ced - if, then not: 181  
 nādī - tube: 88  
 nadīja - salt: 175  
 nāga - elephant/snake: 139  
 nāgara - dried ginger: 175  
 nalada - spikenard: 179  
 nara - men: 138  
 nasal medicine - *nasya*: 134  
 nasal medicines - *nasya*: 174  
 nasya - errhine: 177 - errhines: 120  
 - nasal medicine: 134 - nasal  
 medicines: 174 - snuff: 119  
 nasya - snuff: 114  
 naturally-occurring - *daivakṛte*: 181  
 nature - *ātmaka*: 14  
 needle - *sūcī*: 182  
 nemīsandhānaka - rim-join: 42 - rim-join:  
 43  
 nidarśana - illustration: 229, 235  
 night blindness - *kṣaṇadāndhya*: 175  
 niḥkvātha - stewed juice: 134  
 nīlī - indigo: 117  
 nimeṣa - blink of the eye: 16  
 nipping with the mouth  
 - *mukhasaṃdamṣā*: 138  
 nirdeśa - description: 229, 233  
 nirṇaya - determination: 229  
 nirvacana - interpretation: 229, 235  
 nirvedhima - ready-split: 42  
 nirviṣa - without venom: 149  
 niryāsa - extract: 120 - resin: 16, 124, 126,  
 129  
 niśācara - nocturnal creature: 180  
 niṣevita - prepared: 178 - used: 176  
 nivāta - no wind: 16

niyoga - compulsion: 229, 235  
 no wind - *nivāta*: 16  
 nocturnal creature - *niśācara*: 180  
 non-bloodshot blindness - *araga timira*:  
 181  
 non-flowering tree - *vanaspati*: 179  
 nourishment - *bṛmhaṇa*: 15  
 numbness - *svāpa*: 120  
 nutgrass - *mustā*: 184  
  
 objection - *pūrvapakṣa*: 229  
 oblations - *upahāra*: 161  
 oceanic - *sāmudrikā*: 25  
 ochre - *gairika*: 174f  
 off his hand - *sapāṇa*: 177  
 oil massage - *abhyāṅga*: 118  
 oil rub - *abhyāṅga*: 88, 227  
 oil - *sneha*: 16  
 oil stripe - *snigdharāji*: 154  
 oily stripe - *snigdharāji*: 154  
 ointment - *anulepana*: 118 - *pralepa*: 116,  
 119  
 ointments - *ālepana*: 88  
 ojas - energy: 49 - vital energy: 15  
 oleation - *sneha*: 88  
 omens - *ariṣṭa*: 49  
 opening - *chidra*: 181  
 ophidian - *sarpita*: 149  
 option - *vikalpa*: 229, 235  
 or not distorted - *vāvikṛtā*: 117  
 oṣadhi - herbs: 15 - remedies: 17  
 oṣadhī - remedies: 15  
 outer corner of the eye - *apāṅga*: 181  
 overexcitement - *harṣa*: 15  
 overheating - *dāha*: 173  
  
 pacification - *saṃśamana*: 15 - *upaśama*:  
 16  
 pada - word: 227  
 pādadaḥa - burning sensation in feet: 60  
 padārtha - meaning of the words: 230  
 - signification: 229f  
 padma - the lotus: 152  
 padmaka - himalayan cherry: 184  
 padminikaṇṭaka - lotus-spots: 119  
 pain - *√pīd*: 158



- pain and injury - *vedanābhighāta*: 12  
 pain - *śūla*: 133  
 pair - *mithuna*: 235  
*pāka* - sepsis: 120  
*pākamatsya* - 'cook-fish': 138  
*pakṣa* - fortnight: 16  
*pakṣāghāta* - paralysis: 58  
*pakoādhāna* - intestines: 133  
*pakoāśa* - abdomen: 88  
*pakoāśaya* - intestines: 116, 132  
*palāśa* - flame of the forest: 179  
*pālindaka* - the morning glory: 152  
*pallava* - shoots: 182  
 pallid skin disease - *kuṣṭha*: 133  
*pāṃśu* - earth: 160  
*panasaka* - the jackfruit: 152  
*pañcāṅgulataila* - castor oil: 177  
*paṅgu* - lame: 59  
 panic grass - *dūrvā*: 184  
*pāṇimantha* - manual agitation: 88  
 paralysis - *apakṣāghāta*: 58  
 paralysis of arms and back - *viśvañci*: 59  
 paralysis - *pakṣāghāta*: 58  
*pārāvata* - the pigeon: 153  
*paribhāṣā* - general rule: 179  
*paridāha* - feeling of heat all over: 157  
*paridhūpana* (giving off fumes): 155  
*paridhūpāyana* (giving of fumes): 155  
*pariplutā* - flooded: 193  
*parisarpa* - the snake around: 152  
*parīṣeka* - shower: 118  
*parśvabheda* - ribs crack: 133  
*pārthiva* - earth products: 16 - earthen products: 17  
 partial blindness - *timira*: 177  
 particulars - *vikalpa*: 17  
 parts - *aṅga*: 17  
*pāruṣya* - hoarseness: 129  
 past reference - *atikrāntāpekṣaṇa*: 229, 235  
*paśu* - animals: 16  
*paṭala* - layer: 181  
*pāthā* - velvet leaf: 179  
*patra* - cassia cinnamon: 184 - leaves: 16  
*patraṃṣṭika* - 'wing-scorpions': 139  
*pavanodbhava* - caused by wind: 177  
*payas* - milk: 121  
*payasyā* - holostemma: 184  
 pearl - *muktā*: 181  
 pebble - *aṣṭhīlā*: 116  
 pelt - *carman*: 16  
 periploca of the woods - *meṣaviṣāṇa*: 177  
 periploca of the woods - *meṣaśṛṅga*: 185  
 person - *puruṣa*: 235  
 pervasive - *vyavāyin*: 131  
*peya* - drinkable: 236  
*phala* - fruits: 16  
*phena* - cuttlefish bone: 185  
 phlegm - *kapha*: 129, 132f, 156, 193  
 phlegmatic - *śleṣmalā*: 193  
 physical - *śārīravat*: 17  
*piccītā* - 'flat insects': 138  
*pīḍ-* - press: 181  
 piercing the ear - *kaṇnavyadha*: 39  
 piercing - *vyadha*: 182  
 pigs' eye - *sūkarākṣitā*: 183  
*pilindaka* - the pilindaka: 152  
 pill - *guḍikā*: 175  
 pinched - *gāḍha*: 44  
*piṅgalā* - ruddy: 25  
*pipilika* - ants: 16  
 pith - *sāra*: 124, 126, 129  
*pīṭha* - dais: 42  
*pitta* - bile: 177 - choler: 193  
*pittajvara* - bile-fever: 166  
*pittalā* - bilious / choleric: 193  
*pittaviṣa* - poison in the bile: 161  
*plīhan* - spleen: 176  
*plota* - cloth: 160 - gauze: 44  
*plutā* - sprung: 193  
 poison in the bile - *pittaviṣa*: 161  
 poison-stink - *viṣapūti*: 166  
 poisoned - *digdha*: 166  
 poṭa throat - *poṭagala*: 154  
*poṭagala* - poṭa throat: 154  
 poultice - *upanāha*: 88  
 powdered earthenware crockery - *kapālacūrṇa*: 43  
*pra√sādh* - clean: 120  
*pra√kuth* - rot: 117

*prabha* - shine: 181  
*pracalāka* - 'poisonous snakes': 138  
*pracchāna* - incised: 165 - incising: 162  
*pracchita* - incised: 166  
*practical purposes* - *prayojanavat*: 16  
*pradeśa* - indication: 229, 233  
*pragāḍha* - steeped: 177  
*prakopa* - irritation: 16  
*prakṛti* - constitution: 165 - temperament: 15  
*pralāpa* - ranting: 128  
*pralepa* - ointment: 116, 119  
*prasaṅga* - recontextualization: 229  
     - recontextualization: 234  
*praseka* - discharge: 130  
*pratīkāra* - alleviation: 16 - remedy: 173  
*pratipūraṇa* - irrigated: 119  
*pratisāraṇa* - rub: 117 - rubbing: 117  
*pratiśedha* - counteraction: 173  
*pravardhanaka* - dilator: 41  
*prayojanavat* - practical purposes: 16  
*prediction* - *atideśa*: 229, 233  
*premise* - *hetvartha*: 229  
*premiss* - *sādhana*: 233  
*prepared* - *niṣevita*: 178  
*prepared with tilvaka* - *tailvaka*: 174  
*prepared with turpeth* - *traivṛta*: 174  
*prescription* - *upadeśa*: 233  
*prescription* - *upadeśa*: 229  
*press* - *pīḍ-*: 181  
*priyaṅgu* - beauty berry: 179  
*probe* - *śālākā*: 181f  
*procedure* - *kalpa*: 147, 160  
*procedures* - *kriyā*: 14, 17  
*prolapse* - *māṃsanirgama*: 183  
*prolapses* - *arśas*: 192  
*propelled* - *√ūh*: 158  
*protuberant* - *karṇinī*: 193  
*prṣata* (chital deer): 115  
*prṣata* - the speckled: 152  
*pr̥thakparṇī* - hare foot uraria: 184  
*pulse interval* - *vegāntara*: 158  
*puṇḍarīka* - *puṇḍarīka*: 130  
*puṇḍarīka* - *puṇḍarīka*: 130 - the lotus: 153

*puṇḍarīkamukha* - the lotus mouth: 152  
*puṇḍarīkamukhī* - lotus-mouth: 26  
*pupil* - *dr̥ṣṭi*: 173, 182  
*purge* - *√śodh*: 163  
*purification* - *saṃśodhana*: 15  
*puruṣa* - human being: 14f, 17 - person: 235  
*pūrvapakṣa* - first point of view: 234  
     - objection: 229  
*puṣpa* - flowers: 16  
*puṣpābhikīrṇnābha* - the flower sprinkle beauty: 152  
*puṣpapāṇḍu* - the pale as a flower: 152  
*puṣpasakalī* - the flower all: 153  
*puṭāhvaya* - taken hot: 178  
*puṭākhyā* - enclosed roasting: 177  
*puṭapāka* - enclosed roasting: 179  
     - medicines cooked in a crucible: 174  
     - roasting: 192  
*putraghnī* - child-murderess: 193  
*putrid* - *śīrṇa*: 166  
  
*qualities* - *guṇa*: 131  
  
*racket-tailed drongo* (*bhṛṅgarāja*): 115  
*rāgin timira* - bloodshot blindness: 178  
*rāgiṇi timire* - bloodshot blindness: 181  
*rainbow* - *indrāyudhā*: 25  
*rainy seasons* - *varṣā*: 16  
*rajana* - turmeric: 175  
*rājicitra* - the stripe speckle: 153  
*rājimat* - striped snake: 134  
*raktakṣayā* - with bloodloss: 193  
*raktamaṇḍala* - the red ring: 152  
*raktapitta* - blood-bile: 173  
*ranting* - *pralāpa*: 128  
*rarified* - *sūkṣma*: 131  
*rasa* - chyle: 132 - chyle: 31 - extracts: 179  
     - flavour: 230 - flavours: 15, 49  
     - juices: 178 - the blood of birds and animals: 175  
*rasakriyā* - inspissation: 179  
*rasāñjana* - elixir salve: 175, 178f  
     - elixir-salve: 175  
*rauḥita* - extract of rohu carp: 175  
*ready-split* - *nirvedhima*: 42



- realgar - *manahśilā*: 175, 178f, 185  
 recontextualization - *prasaṅga*: 229  
 recontextualization - *prasaṅga*: 234  
 red arsenic - *manahśilā*: 174f  
 red chalk - *gairikāḥ*: 184  
 red velvet mites - *indragopa*: 16  
 reduced-ear - *hīnakarṇa*: 42  
 regimen - *ācāra*: 15 - *karma*: 182  
 religious power - *tapas*: 161  
 remedies - *oṣadhi*: 17 - *oṣadhī*:- 15  
 remedy - *pratīkāra*: 173  
 resin - *niryāsa*: 16, 124, 126, 129  
 restrictions - *yantraṇā*: 182  
 rheum - *upadeha*: 119  
 ribs crack - *parśvabheda*: 133  
 rigid - *sthirā*: 183  
 rigidity - *jāḍyatā*: 165  
 rigidity of neck - *manyāsthambha*: 59  
 rim of a wheel - *cakradhārā*: 43  
 rim-join - *nemīsandhānaka*: 42  
 rim-join - *nemīsandhānaka*: 43  
*ṛjusarpa* - the straight snake: 152  
 roasting - *puṭapāka*: 192  
 rodents - *mūṣika*: 13  
*roga* - diseases: 192  
*rogasaṃgraha* - compendium of diseases: 190  
*rohita* - rohita tree: 179  
 rohita tree - *rohita*: 179  
 root - *mūla*: 15  
 roots - *mūla*: 16  
 rot - *pra√kuthi*: 117  
 rough - *khara*: 183  
 round blotches - *maṇḍala*: 132  
 royal jasmine - *jātī*: 185  
*ṛtu* - season: 16  
 rub - *pratisāraṇa*: 117  
 rubbing - *mardana*: 88 - *pratisāraṇa*: 117  
     - *unmardana*: 88  
 ruddy - *piṅgalā*: 25  
*rudhira* - blood: 16  
*ruj* - illness: 175  
*rūkṣa* - dry: 131  
 rule - *kalpa*: 137  
 sacrificial offerings - *bali*: 161  
*sāda* - be exhausted: 133  
*ṣaḍaṅga* - the six part: 152  
*ṣaḍdharāṇa* - six-units: 87  
*sādhana* - premiss: 233  
*sādhya* - curable: 173 - cured: 136  
*saindhava* - salt: 134 - sind salt: 174f  
     - sindh salt: 178  
*śākhāśrayā* - located on the limb: 162  
*śalākā* - probe: 181f  
*salilotthita* - conch: 180 - water-born: 180  
*saliva* - *śleṣman*: 116  
 salt - *nadīja*: 175 - *saindhava*: 134  
*śalya* - spike: 233 - splinter: 233  
*samāñjana* - same collyrium: 179  
*samantatastāpaḥ* (hot all over): 155  
*śambūka* - cone snails: 138  
 same collyrium - *samāñjana*: 179  
*samīraṇa* - air: 158  
*śaṃkhaṇḍa* - the conch keeper: 152  
*saṃkṣipta* - compressed: 43  
     - compressed: 42  
*saṃplava* - clusters: 16  
*saṃrambha* - inflamed: 44  
*saṃśamana* - pacification: 15  
*saṃśaya* - doubt: 229, 235  
*saṃśodhana* - purification: 15  
*samuccaya* - aggregation: 229, 235  
*samudāya* - accumulation: 41  
*samuddēśa* - mention: 229, 233  
*samudraphena* - cuttlefish bone: 175f  
*sānudrikā* - oceanic: 25  
*saṃvatsara* - year: 16  
*sañcaya* - accumulation: 16  
 sandal - *sugandhi*: 177  
*śaṇḍhī* - impotent: 193  
*sandhi* - joints: 17  
*śaṅkumukhī* - dart-mouth: 25  
*sannipāta* - congested humours: 17  
 sap - *kṣīra*: 16  
*sapāṇa* - off his hand: 177  
*sāra* - essence: 16 - pith: 124, 126, 129  
*śārava* - 'lids': 139  
*śārikā* - 'darts': 139  
*śārīravād* - physical: 17  
*sarīrpa* - creepy-crawlies: 13, 16

- śārīvā* - indian sarsaparilla: 184  
*sāriva* - indian sarsaparilla: 175  
*śārīvā* - indian sarsaparilla: 184  
*sarpis* - ghee: 174  
*sarpīṣ* - ghee: 121  
*sarpita* - ophidian: 149 - serpented: 149  
*sārṣapa* - sārṣapa: 129  
*sārṣapa* - sārṣapa: 129  
*sarṣapaka* - 'pepper snakes': 138  
*sarvakṛṣṇa* - the all black: 152  
*sarvāṅgasantāpaḥ* (hot over the whole body): 155  
*sarvātmikā* - sarvātmikā: 193  
*sarvātmikā* - sarvātmikā: 193  
*śastrakṣata* - cutting with a blade: 174  
*śastrapada* - marks with a knife: 28  
*śātakumbhī* - gold: 183  
*sātmya* - suitability: 165  
*sauvīraka* - stibnite: 175  
*sāvarikā* - sāvarikā: 26  
*sāvarikā* - sāvarikā: 26  
*scarification* - lekhaṇa: 15  
*sciatica* - gr̥dhrasī: 59  
*scramberry* - tālīśapatra: 175  
*season* - rtu: 16  
*seat of fire in the gut (grahaṇī)*: 156  
*seat of fire in the gut - grahaṇī*: 156  
*secondary ailments* - upadrava: 165  
*sections* - adhyāya: 18  
*seeing smoke* - dhūmadarśin: 173  
*segmented* - chinna: 25  
*seka* - irrigation: 174  
*semen* - bīja: 192  
*separate* - muktvā: 181  
*sepsis* - pāka: 120  
*serpented* - sarpita: 149  
*sesame oil* - taila: 166 - tailam: 224  
*sharp* - tikṣṇa: 163  
*shine* - prabha: 181  
*shooting pain* - śūla: 183  
*shoots* - pallava: 182 - udbhid: 16  
*shower* - pariṣeka: 118  
*shrubs* - vīrudh: 15  
*siddham* - cooked: 224  
*siddhārthaka* - white mustard: 184  
*siddhi* - cure: 134  
*side-effects* - upadrava: 120, 136  
*signification* - padārtha: 229f  
*signs* - cihna: 193  
*śīgru* - horseradish tree: 180  
*simply* - kevala: 164  
*sind salt* - saindhava: 174f  
*sindh salt* - saindhava: 178  
*sinews* - snāyu: 17  
*sirā* - duct: 162 - ducts: 17, 88  
*sirāvedha* - blood-letting: 174  
*siris* - śirīṣa: 185  
*śirīṣa* - siris: 185  
*śirṇa* - putrid: 166  
*śīśuka* - the kid: 152  
*śīta* - elixir-salve: 175  
*sitā* - white sugar: 184  
*six-units* - ṣaḍdharāṇa: 87  
*skin (tvac)*: 147  
*skin disease* - koṭha: 132  
*skin* - tvak: 16f  
*sleep* - svāpa: 129  
*śleṣmalā* - phlegmatic: 193  
*śleṣman* - mucous: 156 - saliva: 116  
*slice of flesh* - vadhra: 46f  
*slow poisoning* - dūṣṭviṣa: 163  
*slow-acting poison antidote* - dūṣṭviṣāri: 117  
*slow-acting poison* - dūṣṭ-viṣa: 133  
*- dūṣṭviṣa*: 136  
*small insects* - kunta: 16  
*snāyu* - sinews: 17  
*sneha* - oil: 16 - oleation: 88  
*sniffing* - ucchiṅgana: 182  
*snigdharāji* - oil stripe: 154 - oily stripe: 154  
*snuff* - nasya: 114  
*snuff* - nasya: 119  
*sole-heart* - talahṛdaya: 235  
*solid* - styāna: 182  
*soma creeper (somalatā)*: 116  
*somalatā* (soma creeper): 116  
*śonita* - blood: 177  
*śonita-pitta, rakta-pitta* - blood-bile: 177  
*śonitāgamana* - haemorrhaging: 155

- śonitena* - with blood: 183  
 soot - *gr̥hadhūma*: 143  
 spasm of the jaw-bones - *ardita*: 59  
 spasmodic contraction - *apatānaka*: 57  
 spasmodic contradiction - *āpatantraka*: 58  
*sphoṭa* - spots: 119f  
 spiders - *lūtā*: 13  
 spike - *śalya*: 233  
 spikenard - *nalada*: 179  
 spiral - *āvarta*: 181  
 spirits - *madirā*: 176 - *madira*: 179  
 spleen - *plīhan*: 176  
 splinter - *śalya*: 233  
 spots - *kaṇṭaka*: 119 - *sphoṭa*: 119f  
 sprung - *plutā*: 193  
*sraja* - garlands: 114  
*sraṃsanī* - causing a fall: 193  
*srāva* - discharge: 118, 120  
*śreyas* - welfare: 12  
*srotas* - ducts: 155 - kohl: 178 - tubes: 156  
*srotoja* - kohl: 175, 185  
 stalk - *vr̥nta*: 174  
 stammers - *gadgad*: 60  
 statement of reason - *apadeśa*: 229, 233  
 stationary - *sthāvara*: 15, 17, 124  
 steeped - *pragādha*: 177  
 sternutatory - *avapīḍa*: 164  
 stewed juice - *niḥkvātha*: 134  
*sthāvara* - stationary: 15, 17, 124  
*sthirā* - rigid: 183  
 stibnite - *añjana*: 179 - *sauvīraka*: 175  
 stick-ear - *yaṣṭikarṇa*: 42  
 stiffness of the neck - *manyāstambha*: 157  
 sting-gush - *alagarddā*: 25  
 stings - *śūla*: 139  
 stirred with goat's milk - *ajākṣīrārdita*: 184  
 stomach - *āmāśaya*: 132f  
 strength - *bala*: 15  
 striped snake - *rājimat*: 134  
 strong mallow - *atibālā*: 177  
 stupor - *mūrcchā*: 116  
*styāna* - solid: 182  
 substance - *dravya*: 49  
 substrate - *āśrayin*: 15  
*sūcī* - needle: 182  
*sūcīvaktṛā* - with a needle-like opening: 193  
 suckable - *lehya*: 236  
 suffering - *duḥkha*: 15  
*sugandhi* - sandal: 177  
 suitability - *sātmya*: 165  
*śūka* - bristles: 138  
*śukapatra* - the white leaf: 153  
*sūkarākṣitā* - pigs' eye: 183  
*sukha* - comfort: 17  
*sūkṣma* - rarified: 131  
*śūla* - pain: 133 - shooting pain: 183  
 - stings: 139  
 sun - *hari*: 182  
 supernatant layer - *agra*: 179  
*sūtra* - aphorism: 230  
*svabhāva* - inherent factors: 17  
*svābhāvika* - inherent: 15  
*svāpa* - numbness: 120 - sleep: 129  
*svara* - accents: 162  
*svarasa* - expressed juice: 174 - extracted juice: 119 - juice extract: 16  
*śvāsa* - wheezing: 129  
*svasaṃjñā* - field-specific term: 235  
 - field-specific term: 229  
*svedaja* - born of sweat: 16  
*śvetadara* - the white rip: 152  
*svetahanu* - the white jaw: 153  
*śvetakapota* - the white pigeon: 152  
*śvetamaṇḍala* - the white ring: 152  
 swollen - *ādhmāta*: 155  
*syanda* - watery eye: 180  
 symptom - *liṅga*: 119  
 symptoms - *liṅga*: 132  
 synovitis of knee joint - *koṣṭukaśīrṣa*: 59  
*taila* - sesame oil: 166  
*tailam* - sesame oil: 224  
*tailasugandhi* - the fragrant one in oil: 177  
*tailvaka* - prepared with tilvaka: 174  
 take away - *āhārya*: 42  
 taken hot - *puṭāhvaya*: 178  
 takes the form of pervading the whole body - *akhiladehavyāptirūpam*: 131

- talahr̥daya* - sole-heart: 235  
*tālīśapatra* - scramberry: 175  
*tāmra* - copper: 183  
*tāmracūḍa* - cock: 178  
*tantrayukti* - logical methods of the system: 229  
*tantuka* - the stretch: 152  
*tapas* - religious power: 161  
*tarpaṇa* - eyewash: 120, 174, 178f  
     - irrigation: 192  
*tatra* - in those cases: 176 - the tatra: 153  
*tawny* - *kapilā*: 25  
*temperament* - *prakṛti*: 15  
 the all black - *sarvakṛṣṇa*: 152  
 the bamboo leaf - *veṇupatraka*: 152  
 the big black - *mahākṛṣṇa*: 152  
 the big cow snout - *vr̥ddhagonasa*: 152  
 the big head - *mahāśīrṣa*: 152  
 the big jackfruit - *mahāpanasaka*: 152  
 the big pigeon - *mahākapota*: 152  
 the black belly - *kṛṣṇodara*: 152  
 the black snake - *kṛṣṇasarpa*: 152  
 the blood of birds and animals - *rasa*: 175  
 the break hood - *khaṇḍaphaṇa*: 152  
 the brown - *babhru*: 152  
 the brown hut mouth - *babhrūkuṭīmukha*: 152  
 the chariot of light - *jyotīratha*: 153  
 the conch keeper - *śaṃkhapāla*: 152  
 the curd mouth - *dadhimukha*: 152  
 the deer foot - *eṇīpada*: 153  
 the drop stripe - *bindurāji*: 153  
 the finger stripe - *aṅgulirāji*: 153  
 the flame - *agnika*: 152  
 the flower all - *puṣpasakalī*: 153  
 the flower sprinkle beauty  
     - *puṣpābhikīrṇnābha*: 152  
 the fragrant one in oil - *tailasugandhi*: 177  
 the gavedhuka - *gavedhuka*: 152  
 the gift of god - *devadinna*: 152  
 the goat swallower - *ajāgara*: 153  
 the grass drier - *tr̥ṇaśoṣaka*: 153  
 the grass flower - *apuṣpa*: 152  
     - *darbhapuṣpa*: 153  
 the great lotus - *mahāpadma*: 152  
 the great snake - *mahāsarpa*: 152  
 the hand decoration - *hastābharaṇaka*: 153  
 the hungry sting - *alagarda*: 152  
 the ilikinī - *ilikinī*: 153  
 the intoxicator - *madanaka*: 152  
 the jackfruit - *panasaka*: 152  
 the khaluṣa - *khaluṣa*: 153  
 the kid - *śīśuka*: 152  
 the kūkuṭa - *kūkuṭa*: 152  
 the little tree - *vr̥kṣaka*: 153  
 the lotus mouth - *punḍarikamukha*: 152  
 the lotus - *padma*: 152 - *punḍarika*: 153  
 the mark - *citraka*: 153  
 the milk flower - *kṣīrikāpuṣpa*: 153  
 the mirror ring - *ādarśamaṇḍala*: 152  
 the morning glory - *pāṇḍaka*: 152  
 the mountain snake - *girisarpa*: 152  
 the mud - *kardama*: 153  
 the ochre - *kaṣāya*: 152  
 the pale as a flower - *puṣpapāṇḍu*: 152  
 the pigeon - *pārāvata*: 153  
 the pilindaka - *pilindaka*: 152  
 the rain cloud - *valāhako*: 152f  
 the red eye - *lohitākṣa*: 152f  
 the red ring - *raktamaṇḍala*: 152  
 the ringed - *cakraka*: 153  
 the science of life - *āyurveda*: 12  
 the sense of the cause - *hetvartha*: 233  
 the six part - *ṣaḍaṅga*: 152  
 the snake around - *parisarpa*: 152  
 the speckled - *pr̥ṣata*: 152  
 the stimulator - *dīpyaka*: 153  
 the straight snake - *r̥jusarpa*: 152  
 the stretch - *tantuka*: 152  
 the stripe speckle - *rājicitra*: 153  
 the tatra - *tatra*: 153  
 the three fruits - *triphalā*: 179  
 the three spices - *vyoṣa*: 175  
 the time for therapies - *kriyākāla*: 17  
 the two finger stripe - *dvyāṅgulirāji*: 153  
 the two-day - *dvyāhika*: 153  
 the variegated - *vicitra*: 152  
 the white jaw - *svetahanu*: 153  
 the white leaf - *śukapatra*: 153

- the white pigeon - *śvetakapota*: 152  
 the white ring - *śvetamaṇḍala*: 152  
 the white rip - *śvetadara*: 152  
 the worm eater - *kikkisāda*: 153  
 the year-snake - *varṣāhika*: 153  
 thei snake flag - *ahipatāka*: 153  
 therapies - *karman*: 17  
 three fruits - *triphalā*: 174, 176  
 three-quarters of an hour - *muḥūrta*: 16  
*tikṣṇa* - sharp: 163  
*timira* - blindness: 180 - partial  
     blindness: 177  
 tooth socket (*dantaveṣṭa*): 117  
 topic - *adhikaraṇa*: 229f  
 torn - *darita*: 149f  
*toṭaka* - 'angry beetles': 138  
 toxic reaction - *vega*: 148, 157f, 163  
     - *viṣavega*: 156  
*traivṛta* - prepared with turpeth: 174  
 treatable - *yāpya*: 136  
 treatment - *bheṣaja*: 193 - *kriyā*: 17, 179  
 triad - *mithuna*: 235  
 trice - *kāṣṭhā*: 16  
*triphalā* - the three fruits: 179 - three  
     fruits: 174, 176  
*trivṛt* - turpeth: 177  
*trṇaśoṣaka* - the grass drier: 153  
 trunk of the body - *koṣṭha*: 156  
 tube - *nāḍī*: 88  
 tubes - *srotas*: 156  
 turmeric - *haridrā*: 179  
 turmeric - *rajana*: 175  
 turpeth - *trivṛt*: 177  
*tuttha* - blue vitriol: 179  
*tvac* (skin): 147  
*tvak* - skin: 16f  
 tympanites - *ādhlamāna*: 60  
  
*ucchiṅgana* - sniffing: 182  
*uccīṭiṅga* - crabs: 139  
*udāvartā* - *udāvartā*: 193  
*udāvartā* - *udāvartā*: 193  
*udbhid* - shoots: 16  
*udveṣṭana* - writhing: 128  
*ūhya* - deducible: 229, 236  
*unmardana* - rubbing: 88  
  
 unsteadiness of the humours  
     - *doṣapariplava*: 183  
 untreatable - *asādhya*: 181  
*upadeha* - rheum: 119  
*upadeśa* - prescription: 229  
     - prescription: 233  
*upadrava* - secondary ailments: 165  
     - side-effects: 120, 136  
*upahāra* - oblations: 161  
*upahita* - combined: 176  
*upanāha* - poultice: 88  
*upaśama* - pacification: 16  
*upasarga* - affliction: 120  
 used - *niṣevita*: 176  
*uśīra* - cuscus grass: 179  
*utpalabhedyaka* - lotus-splittable: 42  
*utpīḍita* - injured: 181  
*utsādana* - dry rub: 118 - dry rubs: 114  
  
*vadhra* - slice of flesh: 46f  
*vaiḍūrya* - beryl: 185  
*vaiṣamya* - irregularities: 15  
*vakrabhrūnetra* - bent brow and eye: 183  
*vāksamūhārthavistāra* (extensive meaning  
     of the collection of statements): 154  
*vaktra* - ends: 183  
*vākyasēṣa* - ellipsis: 229 - ellipsis: 234  
*valāhako* - the rain cloud: 152f  
*vallīkarṇa* - creeper-ear: 42  
*vallūraka* - dried flesh: 42  
*vāminī* - vomiting: 193  
*vānara* - monkey: 138  
*vanaspati* - fruit trees: 15 - non-flowering  
     tree: 179  
*vandhyā* - infertile: 193  
 vapour - *bāṣpa*: 115f, 119  
*varaki* - wasps: 139  
*varcaḥkīṭa* - dung beetles: 138  
*varga* - collection: 17  
 variable statement - *anekānta*: 229  
 variable statement - *anekānta*: 234  
 various treatments - *miśrakacikitsa*: 45  
*varṇa* - complexion: 15, 49  
*varṣā* - rainy seasons: 16  
*varṣāhika* - the year-snake: 153  
*vartti* - wick: 41 - wicks: 185

- vasā* - fat: 178  
*vāta* - wind: 192f  
*vātālā* - windy: 193  
*vāvīkṛtā* - or not distorted: 117  
*veda* - knowledge: 11, 227  
*vedanābhighāta* - pain and injury: 12  
*vega* - toxic reaction: 148, 157f, 163  
*vegāntara* - pulse interval: 158  
 velvet leaf - *pāthā*: 179  
*veṇupatraka* - the bamboo leaf: 152  
*vicitra* - the variegated: 152  
*vidagdha* - inflamed: 174  
*vidaṅga* - embelia: 179  
*viḍbheda* - loose stool: 129, 140  
*vidhāna* - itemization: 229 - itemization: 235  
*vidruma* - coral: 185  
*vikalpa* - option: 229, 235 - particulars: 17  
*vikāsin* - expansive: 131  
*vilocana* - misshapen eyeball: 183  
*vipakva* - matured: 174  
*viparītadarśana* - metamorphopsia: 155  
*viparyaya* - contraposition: 229, 234  
*vīrudh* - shrubs: 15  
*viśāda* - depression: 15  
*viśada* - limpid: 131  
*viṣapūti* - poison-stink: 166  
*viṣavega* - toxic reaction: 156  
*viśleṣa* - disjunction: 132  
*viśvambhara* - 'earth scorpions': 139  
*viśvañci* - paralysis of arms and back: 59  
 vital energy - *ojas*: 15  
*voḍhāra* - bearers: 114  
 vomiting - *vāminī*: 193  
*vṛddhagonasa* - the big cow snout: 152  
*vṛkṣa* - flowering trees: 15  
*vṛkṣaka* - the little tree: 153  
*vṛnta* - stalk: 174  
*vṛṣabha* (bull): 115  
*vyadha* - piercing: 182  
*vyadhi* - disease: 17  
*vyākhyāna* - explication: 229, 235  
*vyākhyāta* - intended: 17  
*vyāla* - wild animals: 16  
*vyāna* breath - *vyāna*: 156  
*vyāna* - vyāna breath: 156  
*vyavāyin* - pervasive: 131  
*vyāyojima* - multi-joins: 42  
*vyoṣa* - the three spices: 175  
 wasps - *kaṇabha*: 139 - *varaki*: 139  
 wasted - *kṣīṇa*: 44  
 water - *jala*: 24  
 water-born - *salilotthita*: 180  
 water-dwellers - *jalaaukas*: 24  
 watery eye - *syanda*: 180  
 welfare - *śreyas*: 12  
 wheezing - *śvāsa*: 129  
 white mustard - *siddhārthaka*: 184  
 white siris - *kinihī*: 179  
 white sugar - *sitā*: 184  
 wick - *vartti*: 41  
 wicks - *vartti*: 185  
 wild animals - *vyāla*: 16  
 wind - *vāta*: 192f  
 windy - *vātālā*: 193  
 with a needle-like opening - *sūcīvaktrā*: 193  
 with blood - *śonitena*: 183  
 with bloodloss - *raktakṣayā*: 193  
 with difficulty - *kṛcchra*: 181  
 with testicles - *aṇḍīnī*: 193  
 without venom - *nirviṣa*: 149  
 womb - *yoni*: 188  
 wood apple (*kapittha*): 174  
 word - *pada*: 227  
 worms - *kṛmi*: 16  
 writhing - *udveṣṭana*: 128  
*yakṛdrasa* - liver extract: 175  
*yakṛt* - liver: 176  
*yamalā* - double: 117  
*yāmya* - in yama's direction: 143  
*yantraṇā* - restrictions: 182  
*yāpya* - alleviated: 176 - can be mitigated: 181 - mitigatable: 173 - treatable: 136  
*yaṣṭīkarna* - stick-ear: 42  
*yavāgū* - gruel: 134, 163  
*yavaudana* - cooked barley: 180  
 year - *saṃvatsara*: 16

*yoga* - cohesion: 230 - compounds: 174  
- formulation: 87  
*yoni* - female reproductive organ: 192f  
- female reproductive system: 192  
- womb: 188

*yonivyāpat* - disorders of the female  
reproductive system: 192  
*yuga* - *yuga*: 16  
*yuga* - *yuga*: 16  
“invincible” - *ajeya*: 136



## Todo list

Can't be "sedation" . . . . .	37
find out about <i>uttarabasti</i> . . . . .	65
Perhaps <i>kalka</i> here could also mean the <i>Terminalia Bellerica</i> (विभीतक). . . . .	90
<i>Euphorbia Antiquorum</i> (Antique spurge) . . . . .	92
The webpage <a href="https://hindi.shabd.in/vairagya-shatakam-bhag-acharya-arjun-tiwari/post/117629">https://hindi.shabd.in/vairagya-shatakam-bhag-acharya-arjun-tiwari/post/117629</a> says that this verse belongs to the <i>Nītiratna</i> . I could not find this text. . . . .	95
The provisional edition should be modified accordingly. . . . .	97
There, Ḍalhaṇa comments that deliberation on <i>avapīḍa</i> had been done earlier when it was mentioned. Find that description to know more details. . . . .	99
Search for the section where the treatment of <i>ākṣepaka</i> is described. . . . .	100
Make the first letter of sentence capital. . . . .	100
? . . . . .	106
? . . . . .	106
? . . . . .	106
(?) . . . . .	106
Cf. <i>Arthaśāstra</i> 1.21.8. . . . .	114
I'm still unhappy about this verse. . . . .	117
Mention this in the introduction as an example of the scribe knowing the vulgate. . . . .	117
fn about <i>sadyas+</i> . . . . .	117
Bear's bile instead of deer's bile. . . . .	118
<i>punarṇṇavā</i> in the N & K MSS . . . . .	119
<i>śrita</i> for <i>śṛta</i> . . . . .	119
explain more . . . . .	119
Medical difference from Sharma. . . . .	120



■ example where the vulgate clarifies that these should be used separately; appears to be a gloss inserted into the vulgate text. . . .	120
■ The two uses of prāpta are hard to translate. prāptāḥ → kṣipraṃ is an example of the vulgate banalizing the Sanskrit text to make sense of a difficult passage. . . . .	120
■ √ vyadh not √ vedh (also elsewhere and for the ears), causative optative. . . . .	120
■ -> ativiṣa . . . . .	130
■ Look up the ca. reference. . . . .	130
■ Come back to the issue of "kalpa". Look up passages in the Kośa. . . .	137
■ write footnote: don't repeat ativiṣā; vulgate similar to H. . . . .	141
■ material corresponds to SS.1.45.205ab, where it describes how alcohol affects the body. . . . .	144
■ Or "There are 20 phaṇins and 6 maṇḍalins. The same number are known. There are 13 Rājīmats." Or even, "there are 20 Phaṇins and six of them are Maṇḍalins." Are phaṇins really the same as darvīkaras? . . . . .	149
■ grammar . . . . .	150
■ ri- ṛ-? . . . . .	152
■ varṇa means "colour" elsewhere? . . . . .	153
■ write note on pariṣekān pradehāṃś . . . . .	164
■ where is cutting with a knife related to removing bile or phlegm. . . .	174
■ maṣī burned charcoal. Find refs. . . . .	174
■ find ref. . . . .	180
■ Check out these refs. . . . .	180
■ meaning of kalpa . . . . .	180
■ or a dual? . . . . .	185
■ Footnote here about who is speaking to whom. . . . .	191
■ a kind of asthma? . . . . .	197
■ Not happy with the last part. . . . .	197
■ connecting with the previous pāda? . . . . .	197
■ (atyartha? excessive?) . . . . .	198
■ for...dvādaśādhikāḥ)? not clear to me, is it dvādaśādhikāḥ? . . . .	198
■ (any better medical terms for them?) . . . . .	198
■ (since the word lagha is not clear to me) . . . . .	199
■ (Not too happy with it.) . . . . .	199
■ (not sure about it) . . . . .	199
■ (Not in vulgate) . . . . .	199

■ (I am looking for a better translation) . . . . .	199
■ (I'd need to rework on it). . . . .	200
■ (I'd need to rework on it and think about the sequencing of the number). . . . .	200
■ (āmadoṣa? Not too sure) . . . . .	200
■ (2nd hemistich is incomplete) . . . . .	200
■ (not too sure about the meaning of vyapada) . . . . .	200
■ not so sure about sodāvarte . . . . .	200
■ not so sure about it, MW mentions others like Cordia Myxa and Alangium hexapetalum . . . . .	201
■ not sure about it . . . . .	201
■ (sāmāhāya- any better word?) . . . . .	201
■ Not so happy with this translation . . . . .	202
■ ( Not happy with it) . . . . .	203
■ (the second hemistich is incomplete) . . . . .	203
■ can śṛta mean here boiled milk? Not happy with the last part . . .	203
■ the rest of the text is unclear to me . . . . .	203
■ (not so sure about it). [ ghṛtābhyaṅgonavasthāsu should it be like ghṛtābhyaṅgo 'navasthāsu?, svedā lepaḥ ghṛtābhyaṅgonavas- thāsu ca yojayet] (Not so happy with the translation) . . . . .	204
■ See also Ḍalhaṇa at 1.1.1 (Su 1938:1) . . . . .	233
■ See chapter 40 of Sūtrasthāna. . . . .	234
■ vasā / medas / majjan . . . . .	234
■ Does bhūtādi a compound or it means ahaṅkāra or ego? . . . . .	235

