

# A Translation of the New Edition of the *Suśrutasaṃhitā*

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The [Suśruta Project](#) is producing a new Sanskrit text edition of the *Suśrutasaṃhitā* based on the early Nepalese manuscripts. As we gradually transcribe and edit the manuscripts, we are producing this new translation of the classic work.

## Contents

<b>The Manuscripts used in the vulgate editions by Yādavaśarma</b>	
<b>Trivikrama Ācārya</b>	<b>3</b>
The manuscripts of the 1915 edition . . . . .	3
The manuscripts of the 1931 edition . . . . .	3
The manuscripts of the 1938 edition . . . . .	4
<b>Sūtrasthāna, adhyāya 1</b>	<b>5</b>
<b>Sūtrasthāna, adhyāya 2</b>	<b>12</b>
Literature . . . . .	12
<b>Sūtrasthāna, adhyāya 16</b>	<b>13</b>
<b>Uttaratantra, adhyāya 16 (17 in the vulgate)</b>	<b>18</b>
Literature . . . . .	18
Translation . . . . .	18
[Complications] . . . . .	27



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[Characteristics of the probe] . . . . .	27
[Complications] . . . . .	28
<b>Sūtrasthāna, adhyāya 28</b>	<b>29</b>
<b>Abbreviations</b>	<b>30</b>
<b>References</b>	<b>32</b>
<b>Glossary</b>	<b>37</b>
<b>Index of Manuscripts</b>	<b>49</b>

## The Manuscripts used in the vulgate editions by Yādavaśarma Trivikrama Ācārya

Yādavaśarma Trivikrama Ācārya produced three successive editions of the *Suśrutasaṃhitā* with the commentary of Ḍalhaṇa, in 1915, 1931 and 1938. These editions, especially the last, are considered the most scholarly and reliable editions of the work, and have been constantly reprinted up to the present day.

The 1915 edition was based on three manuscripts. The 1931 edition used another nine. For his final 1938 edition, Ācārya used a further three.<sup>1</sup>

### The manuscripts of the 1915 edition

- 1 Calcutta, Royal Asiatic Society. Covers the sūtra, nidāna, śārīra and kalpa sthānas.
- 2 Jaipur, Pandit Gaṅgādharaḥṭṭaśarmaṇ, lecturer at the Royal Sanskrit University. Covers the cikitsāsthāna and the uttaratantra.
- 3 Bundi, my great friend the royal physician Paṃ. Śrīprasādaśarmaṇ. Covers the uttaratantra.

### The manuscripts of the 1931 edition

- 1 Vārāṇasī, professor of literature, the great Gaurīnāthapāthaka. With the *Nibandhasaṅgraha*. Covers the *nidānasthāna* and *uttaratantra*.
- 2 Ahmedabad. My friend Sva. Vā. Vaidya Raṇachōḍalāla Motīlālaśarmaṇ. With the *Nibandhasaṅgraha*. Covers the *śārīrasthāna*.
- 3 From the library of my great friend Sva. Vā. Vaidya Murārājīśarmaṇ. Extremely old. No commentary. Covers the *śārīrasthāna*.
- 4 Puṇe, BORI library. With the *Nibandhasaṅgraha*. Covers the *śārīrasthāna*.<sup>2</sup>
- 5 Puṇe, BORI library. With the *Nibandhasaṅgraha*. Complete. With some damaged folia.

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<sup>1</sup>SS 1938: 22.

<sup>2</sup>Not one of the three MSS of the *śārīrasthāna* described in H. D. Sharma 1939.

- 6 Bombay, Asiatic Society. Incomplete.<sup>3</sup>
- 7 Varanasi, the private library of Vaidya Tryambakaśāstrī. Covers the *cikitsāsthāna*. The variant readings of this MS were compiled by Prof. Guruprasādaśāstrī and supplied to Ācārya.
- 8 A printed edition together with the commentary *Suśrutasandīpana-bhāṣya* by Professor Hārāṇacandra Cakravārtti. Complete work. This is the 1910 Calcutta edition numbered “t” by Meulenbeld (HIML: IB, 312).<sup>4</sup>
- 9 A printed edition of the first 43 chapters of the *sūtrasthāna*, printed in Bengali script, with the commentaries *Bhānumatī*, *Nibandhasaṅgraha*, edited by Vijayaratnasena and Niśikāntasena. This is the 1886 Calcutta edition numbered “g” by Meulenbeld (HIML: IB, 311).<sup>5</sup>

## The manuscripts of the 1938 edition

1  
2  
3

edition sthāna	Manuscripts												1938		
	1915			1935											
	1	2	3	1	2	3	4	5	6	7	8	9	1	2	3
<i>sū.</i>	●							●	?		●	● <sup>1-43</sup>	●		●
<i>nī.</i>	●			●				●	?		●		●	●	●
<i>śā.</i>	●				●	●	●	●	?		●		●		●
<i>cī.</i>		●						●	?	●	●		●		● <sup>1-9</sup>
<i>ka.</i>	●							●	?		●		●		
<i>utt.</i>		●	●	●				●	?		●				

<sup>3</sup>Possibly MS Mumbai, AS B.I.3 or MS Mumbai, AS B.D.109 (Velankar 1925–30: v. 1, # 212 and 213). But both these have the *Nibandhasaṅgraha*. The first covers only the *śārīra-sthāna*; the second may be complete, but Velankar calls it only “disorderly.”

<sup>4</sup>Bhaṭṭācārya 1910.

<sup>5</sup>Sena et al. 1886.

## Sūtrasthāna, adhyāya 1

- 1 Now I shall narrate the chapter on the origin of this knowledge.<sup>6</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>7</sup>
- 3 “O Lord, distress arose in our minds after witnessing people thrashing about with cries, assailed by different kinds of pain and injury (*vedanā-bhigāta*), 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>8</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.

<sup>6</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 MSS is highly noteworthy because it removes the outer narrative frame of the *Suśrutasaṃhitā* (Dominik Wujastyk 2013: 148; Klebanov 2021a: § 3.1.2). On the figure of Dhanvatari in medical literature, see HIML: IA 358–361.

<sup>7</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 (SS 1931: 1), and was not included in HIML amongst “authorities mentioned in the *Suśrutasaṃhitā*.” Meulenbeld gathered textual evidence about Bhoja at HIML: IA 690–691. Klebanov (2021b) has discussed these authors in the context of an anonymous commentary on the *Suśrutasaṃhitā* that cites them.

<sup>8</sup>Svayambhū is another name for Brahmā, the creator.

- 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 have been possessed by gods, their enemies,<sup>9</sup> Gandharvas, Yakṣas, demons, deceased ancestors, Piśācas, Vināyakas, <sup>10</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>11</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

<sup>9</sup>Dānavas. The insertion marks (*kākapadas*) below the text at this point appears to be by the original scribe.

<sup>10</sup>The vulgate doesn’t have *vināyakas* but does add *asuras*, probably under the influence of Ḍalhaṇa. Cite Paul Courtright, Ganesha book.

<sup>11</sup>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 N and H include spiders (*lūtā*) and creepy-crawlies (*sarīsrpa*) in the list, it does seem that MS K had a shorter list, and the vulgate edition adds rodents (*mūṣika*).

- 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), 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>12</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>12</sup>This is an expansion of the scribe's abbreviation *bha* for *bhavati cātra ślokaḥ* "There is a verse about this" (sometimes plural).

- 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 (*ātmaka*) is twofold, depending on the preponderance of Agni and Soma.<sup>13</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>14</sup> Where they are concerned, the human being is the main thing; others are his 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>15</sup>

The mental (*mānasa*) ones, caused by desire (*icchā*) and hatred (*dveṣa*), include: anger (*krodha*), grief (*āśoka*), misery (*dainya*), overexcitement (*harṣa*), lust (*kāma*), depression (*viśāda*), 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 (*bṛṃhana*), 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>16</sup> There are two types: stationary (*sthāvara*) and moving

<sup>13</sup>See Dominik Wujastyk 2004.

<sup>14</sup>This fourfold classification of beings is paralleled with closely-related vocabulary in *Bhelasamhitā* 4.4.4 (Bhela 2000: 206; Bhela 1921: 81).

<sup>15</sup>Note that four humoral substances are assumed here.

<sup>16</sup>Pāṇini 6.3.132 provides that the final vowel of the noun *oṣadhi* may be lengthened (→*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



- (*jaṅgama*).
- 31 Of these, there are four types of stationary ones: fruit trees (*vanaspati*), flowering trees (*vrkṣa*), herbs (*oṣadhi*) and shrubs (*vīrudh*).<sup>17</sup> Amongst these, the “fruit trees” have fruit but no flowers.<sup>18</sup> The “flowering trees” have flowers and fruit. The “herbs” die when the fruit is ripe. “Shrubs” put out shoots.
- 32 As is well known, moving remedies are also of four types: those born in a caul (*jarāyujā*), those born from eggs (*aṇḍajā*), those born of sweat (*svedajā*), and shoots (*udbhid*). Amongst these, those born in a caul include animals (*paśu*), humans, and wild animals (*vyāla*). Birds, creepy-crawlies (*sarīrpa*) and snakes are “born of eggs.” Worms (*kṛmi*), small insects (*kunta*) and ants (*pipīlika*) and others are born of sweat.<sup>19</sup> Shoots include red velvet mites (*indragopa*) and frogs (*maṇḍūka*).<sup>20</sup>
- 33 In this context, among the stationary remedies, skin (*tvak*), leaves (*pa-tra*), flowers (*puṣpa*), fruits (*phala*), roots (*mūla*), bulbs (*kanda*), sap (*kṣīra*), resin (*niryāsa*), essence (*sāra*), oil (*sneha*), and juice extract (*sva-rasa*)<sup>21</sup> are useful; among the moving remedies pelt (*carman*), hair, nails, and blood (*rudhira*) and so forth.
- 34 And earthen products (*pārthiva*) include gold and silver.<sup>22</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 fort-

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>17</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>18</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, 1.92.27 *Viṣṇudharmottarapurāṇa*: 56r).

<sup>19</sup>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).

<sup>20</sup>On *indragopa*, see Lienhard 1978.

<sup>21</sup>On juice extract (*sva-rasa*) see CS 1.1.73, 1.4.7; Ḍalhaṇa on SS 4.10.12 (SS 1938<sup>2</sup>: 450).

<sup>22</sup>The flow of concepts in the treatise seems to be interrupted here.

- night (*pakṣa*), a month (*māsa*), a season (*rtu*), a half-year (*ayana*), a year (*saṃvatsara*), and yuga (*yuga*).<sup>23</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>24</sup>
- 37 *This fourfold category is taught by physicians as a cause for the agitation and quelling of bodily diseases.*<sup>25</sup>
- 38 *There are two kinds of invasive diseases. Some certainly<sup>26</sup> affect (nipat-) 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 (*caturṣṭaya*) 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.

<sup>23</sup>These units are presented at SS 1.6.5 (SS 1938<sup>2</sup>:24) and discussed by Hayashi (2017: § 59).

<sup>24</sup>See footnote 12.

<sup>25</sup>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 (*caturvarga*) refers to the quartet of stationary (*sthāvara*), moving (*jaṅgama*), earthen products (*pārthiva*) and items created by time (*kālakṛta*) (SS 1938<sup>2</sup>: 9a).

<sup>26</sup>The text uses an archaic interjection here, *ha*.

- 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>27</sup>

41        *This seed of medicine has been declared in brief. Its explanation will be given in one hundred and twenty chapters.*<sup>28</sup>

42        There are one hundred and twenty chapters in five sections (*adhyāya*).<sup>29</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>30</sup>

[There is a verse about this:]<sup>31</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.*

<sup>27</sup>See footnote 12.

<sup>28</sup>This is the number of chapters in the first five sections of the work, namely the *Sūtra*-, *Nidāna*-, *Śārīra*-, *Cikitsā*- and *Kalpa*-*sthānas*. These have 46, 16, 10, 40 and 8 chapters respectively. The *Uttaratantra* has 66 chapters.

<sup>29</sup>On *viṃśa* in the sense of “greater by 20” see P.5.2.46 *śadantaviṃśateś ca*.

<sup>30</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* (SS 1938: 1.3–4ab) there is indeed a statement that picks up the point about there being 120 chapters.

<sup>31</sup>See footnote 12.

## Sūtrasthāna, adhyāya 2

### Literature

[HIML](#): IA, 204; Preisendanz [2007](#); Dagmar Wujastyk [2012](#): 82–83, *et passim*.

1

## Sūtrasthāna, adhyāya 16

- 1 Now we shall expound the method for the piercing of the ear.
- 2 One may pierce a child's ears for the purpose of preserving and decorating.  
During the first half of the sixth or seventh lunar month, during a renowned day, half day, hour and constellation the child who has received a benediction (*kṛtamaṅgala*), – blessings pronounced (*svastivācana*) – should be placed on the lap of a wet-nurse.<sup>32</sup> For a boy, do the right one first; for a girl do the left one. Use a needle on a thin ear; an awl (*ārā*) on a thick one.
- 3 If there is excess blood or pain one should know that it was pierced in the wrong place. The absence of side-effects is a sign that it has been pierced in the right place.<sup>33</sup>
- 4 In this context, if an ignorant person accidentally pierces a duct (*sirā*) there will be fever, burning, swelling (*śvayathu*), pain, lumps (*granthi*), paralysis of the nape of the neck (*manyāstambhā*), convulsions (*apatānaka*), headache or pain in the ear.
- 5 Having removed the wick (*varti*) in it, one should smear it with a paste of the roots of barley, liquorice, Indian madder (*mañjiṣṭhā*), and the castor oil tree (*gandharvahaṣṭa*), thickened with honey and ghee.  
When it has healed well, one should pierce it again.
- 6 One should treat the properly-pierced ear by sprinkling it raw sesame oil. After every three days one should apply a thicker wick (*varti*) and sprinkle oil right on it.<sup>34</sup>
- 7 Once the ear is free from humours or side-effects, one should loosen it with a light dilator (*pravardhanaka*) in order to enlarge it.
- 8 *An person's ear enlarged in this way can split in two, either as a result of the humours or as a result of a blow.*  
*Listen to me about the joins (sandhāna) it can have.*

<sup>32</sup>The syntax here is unclear. The expression *svastivācana* may have been a gloss inserted into the text at an earlier period to clarify *maṅgala*. But as it stands, it is not syntactically connected to the rest of the sentence. The vulgate records a reading in which the words are united in a compound that reads more naturally.

<sup>33</sup>From here on, witness K is missing a folio, so the text is constructed on the basis of witnesses N and H.

<sup>34</sup>The manuscripts support the reading *sthūlatarīm* that is either a non-standard form or a scribal error.

Here, there are, in brief, fifteen ways of mending the ear. They are as follows: Rim-join, Lotus-splittable, Dried Flesh, Fastening, Cheek-ear, Take away, Ready-Split, Multi-joins, Door-hinge, Half door-hinge, Compressed (*saṃkṣipta*), Reduced-ear, Creeper-ear, Stick-ear, and Crow's lip.

In this context, among these,

“Rim-join” (*nemīsandhānaka*): both flaps are wide, long, and equal.

“Lotus-splittable” (*utpalabhedyaka*): both flaps are round, long, and equal.

“Dried flesh” (*vallūraka*): both flaps are short, round, and equal.

“Fastening” (*āsaṅgima*): one flap is longer on the inside.

“Cheek-ear” (*gaṇḍakarṇa*): one flap is longer on the outside.<sup>35</sup>

“Take-away” (*āhārya*): the flaps are missing, in fact, on both sides.

“Ready-split” (*nirvedhima*): the flaps are like a dais (*pīṭha*).

“Multi-joins” (*vyāyojima*): one flap is small, the other thick, one flap is equal, the other unequal.

“Door-hinge” (*kapāṭasandhika*): the flap on the inside is long, the other is small.

“Half door-hinge” (*ardhakapāṭasandhika*): the flap on the outside is long, the other is small.

“These ten options (*vikalpa*) for joins (*sandhi*) of the ear should be bound. They can mostly be explained as resembling their names.”<sup>36</sup>

The five below are not so successful:

The five from compressed (*saṃkṣipta*) on are incurable. 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 (*granthita*) flesh and the flaps are stretched thin and have stiff (*stabdha*)

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<sup>35</sup>See fig. ??.

<sup>36</sup>This is an odd assertion, given the strangeness of the names.

- ducts (*sirā*). “Crow-lip” has a flap without flesh with compressed (*saṃkṣipta*) tips and little blood. Even when they are bound up, they do not heal because they are hot, inflamed, suppurating (*srāva*), or swollen.
- 10 A person wishing to perform any of these joins should therefore gather together the supplies prepared according to the recommendations of the ‘Preparatory Supplies’ chapter.<sup>37</sup> And in particular, he should gather decanted liquor (*surāmaṇḍa*), milk, water, fermented rice-water (*dhānyāmla*), and powdered earthenware crockery (*kapālacūrṇa*). Next, he should prepare the woman or man who have had the ends of their hair tied up, have eaten lightly, and are firmly supported by qualified attendants. Then, he should ready the bindings (*bandha*) and carry out the procedure with cutting (*chedya*), splitting (*bhedyā*), scarification (*lekhyā*), or piercing (*vyadhana*), examine the blood of the ear to know whether it is tainted (*duṣṭa*) or not. Then if it is tainted by wind, the ear should be bathed with fermented rice-water (*dhānyāmla*) and water; if tainted by choler, then cold water and milk should be used; if tainted by phlegm, then decanted liquor (*surāmaṇḍa*) and water should be used, and then he should scarify it again. Then, arranging the join in the ear so that it is neither proud, depressed, nor uneven, one should make the join. Next, after anointing it with honey and ghee, each ear should be bandaged with cotton (*picu*) and gauze (*prota*), and bound up with a thread, neither too tightly nor too loosely. Then the earthenware powder should be sprinkled on, and medical advice (*ācārika*) should be given. And he should supplement with food as taught in the ‘Two Wound’ chapter.<sup>38</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>39</sup> For when the ear is tainted by wind, then it is obstructed by blood (*raktabaddha*), unhealed and will peel. When tainted with choler, it becomes pinched (*gāḍha*), septic (*pāka*) and red. When tainted by phlegm, it will be stiff (*stabdha*) and itchy. It has excessively copi-

<sup>37</sup>SS.1.5.

<sup>38</sup>SS.4.1.

<sup>39</sup>The vulgate reads “impure” for the Nepalese “too pure,” which would appear to make better medical sense. Emending the text to *nāśuddha*- for *nātīśuddha*- in the Nepalese recension would yield the same meaning as the vulgate.



- ous suppuration (*srāva*) and is śopha (*puffed up*). It has a small amount of wasted (*kṣīṇa*) flesh and it will not grow.<sup>40</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 angry (*saṃrambha*), burning, septic or painful. It may even be split open again.
- 14 Now, massage for the healthy ear, in order to enlarge it. One should gather as much as one can of the following: a monitor lizard (*godhā*<sup>41</sup>), scavenging (*pratuda*) and seed-eating (*viṣkira*) birds, and creatures that live in marshes or water,<sup>42</sup> fat, marrow, milk, and sesame oil, and white mustard oil. Then cook the oil with an admixture (*prativāpa*) of the following: purple calotropis (*arka*<sup>43</sup>), white calotropis (*alarka*<sup>44</sup>), country mallow (*balā*<sup>45</sup>), ‘strong Indian mallow’ (*atibalā*<sup>46</sup>), country sarsaparilla (*anantā*<sup>47</sup>) beggarweed (*vidāri*<sup>48</sup>), liquorice (*madhuka*), hornwort (*jalaśūka* → *jalanīlikā*<sup>49</sup>),<sup>50</sup> items having the ‘sweet’ savour (*madhuravarga*),<sup>51</sup> and ‘milk flower’ (*payasyā* → *vidārī*<sup>52</sup>). This should then be deposited in a well-protected spot.
- 15 *The wise man who been sweated should rub the massaged (mardita) ear with it. Then it will be free of complications, and will enlarge properly and be strong.*
- 16 Ears which do not enlarge even when sweated and oiled, should be scarified at the edge of the hole (*apāṅga*), but not outside it.
- 17 In this tradition, experts know countless repairs to ears. So a physi-

<sup>40</sup>This passage exemplifies numerous small changes

<sup>41</sup>Varanus bengalensis, Schneider (Daniel 1983:58)

<sup>42</sup>For such classifications, see **zimm-jung** and **smit-clas**.

<sup>43</sup>Calotropis gigantea, (L.) R. Br. (ADPS 52, AVS 1.341, NK #427, Potter 57, ID 306)

<sup>44</sup>Calotropis procera, (Ait.) R. Br. (NK #428, GIMP 46b, ID 306)

<sup>45</sup>Sida cordifolia, L. (ADPS 71, NK #2297)

<sup>46</sup>Abutilon indicum, (L.) Sweet; Sida rhombifolia, L.? (NK #11, IGP ,4 1080; NK #2300)

<sup>47</sup>Hemidesmus indicus, (L.) R. Br. (ADPS 434, AVS 3.141–5, NK #1210)

<sup>48</sup>Desmodium gangeticum (L.) DC (Dymock 1.428, GJM 602, cf. NK #1192; ADPS 382, 414 and IMP 2.319, 4.366 are confusing)

<sup>49</sup>Ceratophyllum demersum, L. (IMP 2371, AVS 2.56, IGP 232)

<sup>50</sup>This name is not certain: in fact, the commentator Ḍalhaṇa notes that some people interpret it as a poisonous, hairy, air-breathing, underwater creature.

<sup>51</sup>The items which exemplify the ‘sweet’ savour (*madhuravarga*) are enumerated at SS.1.42.11.

<sup>52</sup>Pueraria tuberosa (Willd.) DC. (ADPS 510, IMP 1.792f., AVS 4.391; not Dymock 1.424f. See GJM supplement 444, 451, IMP 1.187, but IMP 3.1719 = Ipomoea mauritiana, Jacq.)



- cian who is very intent (*suniviṣṭa*) on working in this way may repair (*yojayed*) them.
- 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.
- 19 Now I shall describe the proper method of repairing a severed nose. 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*) with the same measurements off the cheek, the end of the nose is then scarified.<sup>53</sup> Then the diligent (*apramatta*) physician, should quickly put it back together (*pratisandhā-*) so that it is well joined (*sādhubaddha*).<sup>54</sup>

Having carefully observed that it has been well sown up, two tubes should be fixed in place. Then, having lifted them up,<sup>55</sup> the powder of sappanwood (*pattāṅga*<sup>56</sup>),<sup>57</sup> liquorice (*yaṣṭimadhuka*<sup>58</sup>), and Indian barberry (*añjana*<sup>59</sup>) should be applied to it.

añjana

- 22 The wound should be covered properly with cotton (*picu*) 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>60</sup>
- 23 And once healed and really come together, what is left of its flesh (*vadhra*) should then be trimmed. If it is reduced (*hīna*), however, one should make an effort to stretch it, and one should make its overgrown flesh smooth.

<sup>53</sup>The vulgate reads bound, connected (*baddham*) for 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-roots3**).

<sup>54</sup>Or '... off the cheek, it is fixed to the end of the nose, which has been scarified'. The Sanskrit text is unfortunately not unambiguous on the important point of whether or not the flap of grafted skin remains connected to its original site on the cheek.

<sup>55</sup>The Sanskrit here, *unnāmayitvā* is non-Pāṇinian.

<sup>56</sup>Caesalpinia sappan, L. (AVS 1.323, IMP 2.847f.)

<sup>57</sup>For *pattāṅga* there are manuscript variants *pattrāṅga* (MS H) and *pattaṅga* (N). We read with H and K (f. 14r:1) on Y. T. Ācārya and N. R. Ācārya (SS 1938<sup>2</sup>:1.14.36). The vulgate reads *pataṅga* and this reading is propagated in modern dictionaries.

<sup>58</sup>Glycyrrhiza glabra, L. (AVS 3.84, NK #1136)

<sup>59</sup>Berberis aristata, DC. (Dymock 1.65, NK #685, GJM 562, IGP 141)

<sup>60</sup>The expression *svayathopadeśa* is ungrammatical but supported in all available witnesses.

## Uttaratantra, adhyāya 16 (17 in the vulgate)

### Literature

Survey of this chapter and the existing research on it to 2002: [HIML: IA](#), 305–306.

History of couching in India: Scott [1817](#); Breton [1826](#); Jack [1884](#); Hendley [1895](#); Elliot [1918](#); Parshwanath Shastri [1940](#); Deshpande [1999](#); [2000](#); Dagmar Wujastyk [2019](#); Leffler et al. [2020](#).

### 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>61</sup>
- 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 a balm (*tarpaṇa*),<sup>62</sup> but not cutting with a blade (*śastrakṣata*).<sup>63</sup>  
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 (*trivṛta*) 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, 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;

where is cutting with a knife related to removing bile or phlegm.

maṣī burned charcoal. Find refs.

<sup>61</sup>This disease and its cure are described earlier (SS.6.7.39 and SS.6.10.16 ([SS 1938<sup>2</sup>](#): 609 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.

<sup>62</sup>These therapies are described in SS.6.18 ([SS 1938<sup>2</sup>](#): 633–640).

<sup>63</sup>Dalhaṇa interprets this as blood-letting (*sirāvedha*), which is discussed in SS.1.14 ([SS 1938<sup>2</sup>](#)).

- Cow's flesh (*gomāṃsa*), black pepper (*marica*), siris (*śirīṣa*) and red arsenic (*manaḥśilā*);
  - stalk (*vr̥nta*) from a wood apple (*kapittha*) with honey (*madhu*);<sup>64</sup>
  - or the the fruits of the velvet bean (*svayaṃgupta*).
- 8 The physician should make a collyrium with ground up metal (*kupyaka*),<sup>65</sup> Asoka tree (*aśoka*), Sal tree (*śālā*), mango (*amra*), beautyberry (*priyaṃgu*), Indian lotus (*nalina*), blue lotus (*utpala*), together with hareṇu (*hareṇu*), emblic (*āmalaka*), myrobalan (*pathyā*), long pepper (*pippali*). It should be combined with ghee and honey (*kṣaudra*).
- 9–10 Also, when bile and phlegm have developed, the physician should apply hareṇu (*hareṇu*) with the expressed juice (*svarasa*) of the flowers from mango (*amra*) and Jambu (*jambū*) trees. Then this collyrium, matured (*vipakva*) with ghee and honey (*kṣaudra*), should then be applied.
- 10–11ab Filaments (*kiñjalka*) of Indian lotus (*nalina*) and blue lotus (*utpala*), with ochre (*gairika*), and the juice of cow-dung (*gośakṛt*) are a collyrium in the form of a pill (*guḍikā*). This is good for both day and night blindness.
- 11cd–12ab Elixir-salve (*rasāñjana*), honey (*kṣaudra*), ghee, scrambleberry (*tālīśa*), 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>66</sup> Then he mixes it with the bile of a tortoise or with extract of rohu carp (*rauhita*). It should always be used with powdered collyrium to quell the bile.
- 14 Thus, a collyrium of white teak (*kārśmarī*) flowers, liquorice (*madhuka*), tree turmeric (*dārvī*), lodh tree (*lodhra*) 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

<sup>64</sup>wood apple (*kapittha*) in this verse is ablative singular or accusative plural, neither of which construe obviously.

<sup>65</sup>A metal other than gold or silver, according to V. Jośī and N. H. Jośī 1968: 1.217. Perhaps lead, which is used in making contemporary collyrium.

<sup>66</sup>This is Ḍaḥṇa's preferred interpretation of *rasa* "juice" in this context. He also notes that some take elixir-salve (*śīta*) to be camphor.

- three spices, collyrium, realgar (*manaḥśilā*), the two turmeric (*rajana*)<sup>67</sup> and liver extract (*yakṛdrasa*).<sup>68</sup>
- 16 One should grind up kohl (*srotoja*),<sup>69</sup> and Sind salt (*saindhava*) and long pepper and also hareṇu (*hareṇu*). Such wicks with goats urine are good in a collyrium for night blindness (*kṣaṇadāndhya*).
- 17–18ab Alternatively, in such a case, grind together Indian sarsaparilla (*kālā-nusāriva*)<sup>70</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.
- 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 (*dhātṛī*) 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>71</sup> with long pepper, honey and box myrtle (*kaṭṭphala*). 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 is good.
- 23 Alternatively, a collyrium that is hareṇu (*hareṇu*) mixed with long pepper (*māgadhi*), the bone and the marrow of a goat, cardamom (*elā*) and

<sup>67</sup>Turmeric (*Curcuma longa* Linn.) and tree turmeric (*Berberis aristata* DC). The term *rajana* is unusual; the normal term is *rajanī*. *Rajana* occurs in *Suśrutaniḥṣaṇṭu* 158 in the sense of *Ferula asafoetida*, Linn.

<sup>68</sup>This verse appears as no. 27 in the vulgate.

<sup>69</sup>Glossed by Ḍalhaṇa as a kind of collyrium. Cf. Nadkarni 1954: 2.M13 and P. V. Sharma 1982: 197–198

<sup>70</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 Sivarajan and Balachandran (1994: 434–438) for a clear discussion.

<sup>71</sup>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.

- liver, together with liver extract, is good for eyes afflicted by phlegm.<sup>72</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 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>73</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*).
- 26cd–27 When an eye-disease is caused by wind (*pavanodbhava*) they say that castor oil (*pañcāṅgulataila*) mixed with milk is good.<sup>74</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>75</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>76</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-

<sup>72</sup>On the identities of *elā* and *hareṇu* Watt (1908: 511 ff) described the former as “true” or “lesser” or “Malabar” cardamom, *Elettaria cardamomum*, Maton & White, in contrast to the “greater” cardamom is *Amomum subulatum* (that he discusses on p. 65) that is commonly used as an inferior substitute for *E. cardamomum*. Singh and Chuneekar (1972: 467 f) 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).

<sup>73</sup>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.

<sup>74</sup>Ḍalhaṇa says that the unexpressed topic of this recipe is partial blindness (*timira*).

<sup>75</sup>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

<sup>76</sup>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.

- ground three fruits mixed with ghee off his hand (*sapāṇa*).<sup>77</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 (*na-sya*).<sup>78</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 honey and ghee.<sup>79</sup>  
Fat (*vasā*) from a horse, a vulture, a snake, and a cock (*tāmracūḍa*), combined with mahua (*madhūka*) is always good in a collyrium.<sup>80</sup>
- 33 Having prepared (*niṣevita*) a collyrium made of kohl (*srotas*) and gradually combine it with juices (*rasa*), milk and ghee.<sup>81</sup>  
For thirty days, this collyrium is put in the mouth of a black snake that

<sup>77</sup>“Off his hand” translates the adverbial *sapāṇam*, an unusual word. Ḍalhaṇa reproduces a reading close to the Nepalese recension but says that Jejjāta rejects it and so he also does (SS1938<sup>2</sup>: 627).

<sup>78</sup>“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.

<sup>79</sup>Ḍalhaṇa notes (SS1938<sup>2</sup>: 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 (SS1938<sup>2</sup>: 635). On the *puṭa* process in the *Suśrutasaṃhitā*, which is earlier and different than that of *rasaśāstra* literature, see the discussion by Dagmar Wujastyk (2019: 83):

The term ‘enclosed roasting’ (*puṭapāka*) does occur in the *Suśrutasaṃhitā* 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.

<sup>80</sup>This verse contains 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.

<sup>81</sup>Ḍalhaṇa specifies that the juices are meat soups of various animals (SS1938<sup>2</sup>: 628).



- is covered with kuśa grass (*kuśa*).
- 34 Next, a collyrium that is milk containing long pepper (*māgadhi*), 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>82</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, a balm (*tarpaṇa*) is good that is a combination that is the flesh of wild animals taken hot (*puṭāhvaya*).<sup>83</sup>
- 36 And realgar (*manaḥśilā*) mixed with elixir salve (*rasāñjana*) and honey is a liquid collyrium (*dravāñjana*) which is, in this case, combined with mahua (*madhūka*).<sup>84</sup>
- Alternatively, experts on this say that finely ground blue vitriol (*tuttha*) extracted from a gold mine is the “same collyrium” (*samāñjana*).<sup>85</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>86</sup>
- The extracts (*rasa*) produced from aflame of the forest (*palāśa*), Rohīta tree (*rohīta*),<sup>87</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>88</sup>
- One should apply smoke of the bark of embelia (*vidaṅga*), velvet leaf

<sup>82</sup>Ḍalhaṇa describes this blindness as a type of *kāca* disease caused by wind (SS 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.

<sup>83</sup>The expression taken hot (*puṭāhvaya*) is a guess.

<sup>84</sup>The expression liquid collyrium (*dravāñjana*) is only known from Ḍalhaṇa’s comments on SS.6.17.11ab (SS 1938<sup>2</sup>: 626). The recipe in the present collyrium is different from that discussed by Ḍalhaṇa.

<sup>85</sup>The expression “same collyrium” (*samāñjana*) is a hapax legomenon glossed inexplicably by Ḍalhaṇa as “a collyrium with an equal amount of fermented barley” (*tulya-sauvīrāñjana*) (SS 1938<sup>2</sup>: 628).

<sup>86</sup>The ablative “from collyrium” is hard to construe, but Ḍalhaṇa uses this term and phrase in his commentary on SS 6.17.41ab (SS 1938<sup>2</sup>: 629).

<sup>87</sup>Probably *Soymida febrifuga* A. Juss.

<sup>88</sup>Ḍalhaṇa invokes a general rule (*paribhāṣā*) to indicate that this mixture should be cooked with sesame oil.

- (*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>89</sup> as well as turmeric (*haridrā*) and spikenard (*nalada*) is good in a balm (*tarpaṇa*).  
Alternatively, one may have an enclosed roasting (*puṭapāka*) done with arid-land animals (*jāṅgala*)<sup>90</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 (*rasāñjana*).<sup>91</sup>  
They say that an elixir salve (*rasāñjana*) combined with myrobalans, treacle and dried ginger is good.<sup>92</sup>
- 41 Alternatively, a collyrium that has been prepared many times in the eight types of urine<sup>93</sup> is put into water with the three fruits. Having stored it in the mouth of a nocturnal creature (*niśācara*)<sup>94</sup> one should place it in a conch (*salilotthita*) for two months.<sup>95</sup>
- 42 One should apply that collyrium 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>96</sup>
- 43 For one who has a humour, the physician should consider the rule in

find ref.

Check out these refs.

<sup>89</sup>These are fig trees. The *Sauśrutanighaṇṭu* (252) specifies the Uḍumbara. Cf. the classification in CS.1.1.71–72, 1.8, *et passim*.

<sup>90</sup>On this term, see SS.1.35.42 (SS 1938<sup>2</sup>:157) and the discussion by Zimmermann (1999: 25–31).

<sup>91</sup>Ḍalhaṇa glosses treatment (*kriyā*) specifically as inspissation (*rasakriyā*) (SS 1938<sup>2</sup>: 629).

<sup>92</sup>We emend *hite* to *hitam*, against the MSS.

<sup>93</sup>See SS *mūtravarga*

<sup>94</sup>Ḍalhaṇa glosses nocturnal creature (*niśācara*) as “vulture,” although elsewhere in the SS it is more commonly interpreted as a spirit or demon. In the present context, following verses 33 and 34, it is probably a snake.

<sup>95</sup>We interpret “water-born” (*salilotthita*) as “conch” in line with *jalodbhava*, but the term is uncertain.

<sup>96</sup>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.



- all humoral cases and then smear the ointment on the face.<sup>97</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>98</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>99</sup>
- 45 Someone who uses matured ghee, the three fruits, wild asparagus (*śa-tāvarī*), as well as mung beans (*mudga*), 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 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 is mitigable (*yāpya*).
- 49 I shall explain the therapy for success when there is a cataract (*liṅga-nāśa*) 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>100</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

<sup>97</sup>The vulgate edition omits part of this verse (ab) combining earlier and later passages.

<sup>98</sup>The term watery eye (*syanda*) refers to the specific disease *abhiṣyanda*. See SS.6.6.5, 1.46.51, etc.

<sup>99</sup>Ḍalhaṇa notes that *Kalpa* means the Uttaratāntra adhyāya 18 (SS 1938<sup>2</sup>: 633 ff).

<sup>100</sup>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. AS utt.17.1–3 (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.

the black part (*kṛṣṇa*) and from the outer corner of the eye (*apāṅga*). Having pressed ( $\sqrt{pīḍ}$ ) properly into the eye,<sup>101</sup> at the naturally occurring (*daivakṛte*) hole (*chidra*) with the probe (*śalākā*) made of copper or iron, with a tip like a barley-corn that is 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, there is the simultaneous issue of a drop of liquid and a sound.<sup>102</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 (*drṣṭimanḍala*) with the tip of the probe (*śalākā*).<sup>103</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>104</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>105</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 (*drṣṭi*) shines like the sun (*hari*) in a cloudless sky; then, when objects become visible, one may slowly remove the probe (*śalākā*).<sup>106</sup>
- 60 Having smeared ghee on the eye, one should cover it with a bandage.

<sup>101</sup>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.

<sup>102</sup>Ḍalhaṇa interprets simultaneous (*samyak*) rather as "proper," referring to the proper kind of incision.

<sup>103</sup>The anatomy of the eye is described in SS 6.1.14–16 (SS 1938<sup>2</sup>: 596) The disks or *maṇḍalas* are the circuits or disks of the eye.

<sup>104</sup>Ḍalhaṇa describes sniffing (*ucchiṅgana*) at SS 6.19.8 (SS 1938<sup>2</sup>: 641), clearly intending inward sniffing.

<sup>105</sup>We interpret *bhaṅga* as leaves, following the usage elsewhere in this sthāna SS 4.32.9, 6.11.5 (SS 1938<sup>2</sup>: 513, 614) where *bhaṅga* means shoots (*pallava*). A similar procedure is described at AS 6.17.25 (AS 1980: 716a), where sweating of the eye is done by means of the leaves of a castor-oil plant.

<sup>106</sup>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 (*abhrāmukta*)". The latter meaning is supported (in different words) by the vulgate and occurs elsewhere in Sanskrit literature.

- Then, he must lie down supine in a house free from disturbances.<sup>107</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>108</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 (*dṛṣṭi*) and also 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>109</sup>  
A hard probe leads to shooting pain (*śūla*), a thin to unsteadiness of the humours (*doṣapariplava*),<sup>110</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>111</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

<sup>107</sup>Ḍalhaṇa explains disturbances specifically as dust, smoke, drafts and sunlight SS 6.17.67 (SS 1938<sup>2</sup>: 631a).

<sup>108</sup>Ḍalhaṇa glosses “restrictions (*yantraṇā*)” as having a controlled diet and the other restrictions appropriate to someone who is taking oil as a preparation before further therapy (SS 6.17.68 (SS 1938<sup>2</sup>: 631)). These restrictions are also described at SS 6.18.28 (SS 1938<sup>2</sup>: 635) and Ah 1.16.25cd (Ah1902: 249).

<sup>109</sup>The condition of “misshapen eye” is referred to briefly in SS 6.61.9 (SS 1938<sup>2</sup>: 800), where Ḍalhaṇa glosses it as “bent brow and eye (*vakrabhrūnetra*).” The vulgate’s reading of “with blood (*śonitena*)” is easier to construe.

<sup>110</sup>There is a medically significant difference here from the vulgate, which reads “a rough (*khara*) probe” not a “thin” probe.

<sup>111</sup>This translation of loss of function (*kriyāsaṅga*) is given on the basis of Ḍalhaṇa’s gloss of *kriyāsaṅgakarī* as “causing the destruction of actions such as moving (*gamanādikriyāvināśakārī*)” at SS 3.8.19 (SS 1938<sup>2</sup>: 382).

- a bud at both ends (*vaktra*).
- 67 A commendable probe should be made of silver, iron or gold (*śātaku-mbhī*).<sup>112</sup>

### [Complications]

- Redness, swelling, lumps, driness (*coṣa*), bubbling (*budbuda*),<sup>113</sup> pigs' eye (*sūkarākṣitā*),<sup>114</sup> irritation (*adhimantha*), etc. and other diseases arise from faults in the piercing,
- 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 (*gairikaḥ*), Indian sarsaparilla (*śārivā*), panic grass (*dūrvā*), and ghee ground with barley.
- 70 This face ointment is to be used for quelling pain and redness. Or else it may be taken combined with the juice of citron (*mātulūṅga*) with sesame gently fried, mixed with white mustard (*siddhārthaka*).<sup>115</sup> This is immediately beneficial when someone is looking for relief.
- 71 A paste with *Holostemma* (*payasyā*),<sup>116</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>117</sup>

<sup>112</sup>The vulgate reads “copper (*tāmra*)” in place of “silver.”

<sup>113</sup>Ḍalhaṇa glosses “bubbling (*budbuda*)” as “prolapse (*māṃsanirgama*) that looks like bubbles.”

<sup>114</sup>The expression “pigs' eye” appears to be a *hapax*. It is glossed as “downward vision (*adhodṛṣṭitva*)” by Ḍalhaṇa.

<sup>115</sup>On the adverbial use of gently (*mṛdu*), see Gombrich 1979.

<sup>116</sup>The identity of *payasyā* is debated (Singh and Chunekar 1972: 538), 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. (Sivarajan and Balachandran 1994: 195–196). The *Sauśrutaniḥaṇṭu* glosses it as *kṣīrikā* or *arkapuṣpikā* (Suvedī and Tivārī 2000: v. 307).

<sup>117</sup>The expression “stirred with goat's milk (*ajākṣīrārdita*)” is difficult. It may be connected with the rare root *ard* documented by Whitney (1885: 15). Cf. *√ard gatau* (*Dhātupāṭha* 1.56).

## Sūtrasthāna, adhyāya 28

- 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>118</sup>

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<sup>118</sup>SS 1.1.28 (SS 1938<sup>2</sup>: 7), tr. P. V. Sharma 1999–2001: I, 21.

## Abbreviations

Ah1902	Kuṁṭe, Ananta Moreśvara and Navare, Kṛṣṇaśāstrī Rāmacandra (1902) (eds.), श्रीमद्वाग्भटविरचितम् अष्टाङ्गहृदयम्, सूत्र-शारीर-निदान-चिकित्सा-कल्प-उत्तरस्थानविभक्तम् श्रीमदरुणदत्तप्रणीतया सर्वाङ्गसुन्दर्याख्यया व्याख्यया समलंकृतम् (Kṛṣṇadāsa Āyurveda Sīrīja, 3; Mumbayyām: Nirṇaya-sāgara Press).
AS 1980	Āṭhavale, Anaṁta Dāmodara (1980) (ed.), <i>Aṣṭāṅgasan̄grahaḥ. Śrīmad Vṛddhāvāgbhaṭaviracitaḥ Induvyākhyāsahitaḥ</i> (Pune: Maheśa Anaṁta Āṭhavale, Śrīmad Ātreya Prakāśanam), <a href="https://doi.org/10.13960/t9773bb9z">ark:/13960/t9773bb9z</a> .
Bhela 1921	Mookerjee, Ashutosh and Ananta Krishna Shastri, Vedantabisharad (1921) (eds.), <i>The Bhela Samhita. Sanskrit Text</i> (Calcutta: University of Calcutta), <a href="https://doi.org/10.13960/t3sv3157j">ark:/13960/t3sv3157j</a> ; Based on two copies made of the Thanjavur codex unicus (MS Thanjavur TMSSML 10773, Burnell 1880: 63–4, Sastri 1933: #11085).
Bhela 2000	Krishnamurthy, K. H. (2000), <i>Bhela-saṁhitā. Text with English Translation, Commentary and Critical Notes</i> (Haridas Ayurveda Series, 8; Varanasi: Chaukhambha Visvabharati).
HIML	Meulenbeld, Gerrit Jan (1999–2002), <i>A History of Indian Medical Literature</i> , 5 vols. (Groningen: E. Forsten), ISBN: 9069801248.
SS 1931	Ācārya, Yādavaśarma Trivikrama (1931) (ed.), सुश्रुतसंहिता, वैद्यवरश्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया समुल्लसिता, महर्षिणा सुश्रुतेन विरचिता, सूत्र-निदान-शारीर-चिकित्सा-कल्पस्थानोत्तरतन्त्रात्मकः. आचार्योपाह्वेन त्रिविक्रमात्मजेन यादवशर्मणा संशोधिता = <i>The Sushrutasaṁhitā of Suśruta with the Nibandhasaṅgraha Commentary of Shree Dalhaṇāchārya</i> (2nd edn., Mumbayyām:

- Pāṇḍuraṅga Jāvajī at the Nirṇayasāgara-mudrāyantrālaye), [ark : / 13960 / t9j41sg94](#), accessed 09/06/2020; [HIML](#): IB, 312 edition \*v.
- SS<sub>1938</sub> Ācārya, Yādavaśarma Trivikrama and Ācārya, Nārāyaṇa Rāma (1938) (eds.), श्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया निदानस्थानस्य श्रीगयदासाचार्यविरचितया न्यायचन्द्रिकाख्यपञ्जिकाव्याख्यया च समुल्लसिता महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता (3rd edn., Bombay: Nirṇayasāgara Press); [HIML](#): IB, 313 edition cc.
- SS<sub>1938</sub><sup>2</sup> Ācārya, Yādavaśarma Trivikrama and Ācārya, Nārāyaṇa Rāma (2004) (eds.), महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता, श्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया निदानस्थानस्य श्रीगयदासाचार्यविरचितया न्यायचन्द्रिकाख्यपञ्जिकाव्याख्यया च समुल्लसिता (Vārāṇasī: Caukhambhā Kṛṣṇadāsa Akādamī); Reprint of the third, 1938 edition (SS<sub>1938</sub>), with changed pagination.
- SS<sub>1915</sub> Ācārya, Yādavaśarma Trivikrama (1915) (ed.), सुश्रुतसंहिता, सुश्रुतेन विरचिता, वैद्यवरश्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया समुल्लसिता, आचार्योपाह्वेन त्रिविक्रमात्मजेन यादवशर्मणा संशोधिता = *The Sushrutasaṃhita of Sushruta, the Nibandhasangraha Commentary of Shri Dalhaṇāchārya* (Mumbayyām: Nirṇayasāgaramudrāyantrālaye), [ark : / 13960 / t3sv0mt50](#), accessed 29/07/2020; [HIML](#): IB, 312 edition \*v.
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## Glossary

√pīḍ

pressed: 26

nīpat-

affect: 10

“same collyrium”

samāñjana: 23

“water-born”

salilotthita: 24

abhayā

chebolic

myrobalan: 20

abhramukta

free from clouds:

26

ācāra

regimen: 8

ācārika

medical advice: 15

accumulation

sañcaya: 10

adhimantha

irritation: 28

adhiṣṭhāna

located: 8

adhodṛṣṭitva

downward vision:

28

adhyāya

sections: 11

affect

nīpat-: 10

āgantū

external factors: 11

agra

supernatant layer:

23

agramukta

free from the point:

26

āhāra

diet: 8

ahorātra

day and night: 9

aids

aṅga: 21

ajākṣīrārdita

stirred with goat’s

milk: 28

ālepa

liniment: 18

alleviated

yāpya: 21

alleviation

pratīkāra: 10

along these lines

evam: 10

āmalaka

emblic: 19

amra

mango: 19

aṇḍaja

born from eggs: 9

aṅga

aids: 21

parts: 10

anger

krodha: 8

angry

saṃrambha: 16

animals

paśu: 9

añjana

application of

collyrium: 18, 23

stibnite: 23

antra

entrails: 21

ants

pipīlika: 9

apāṅga

edge of the hole: 16

outer corner of the

eye: 26

apatānaka

convulsions: 13

application of collyrium

añjana: 18, 23

apramatta

diligent: 17

ārā

awl: 13

araga timira

non-bloodshot

blindness: 25

arid-land animals

jāṅgala: 24

arṇavamala

cuttle fish: 20

asādhya

incurable: 18

aśoka

asoka tree: 19

āsoka

grief: 8

asoka tree

aśoka: 19

āśrayin

substrate: 8

asthi

bones: 10

asūyā

jealousy: 8

atibālā

strong mallow: 22

ātmaka

nature: 8

āvarta

spiral: 25

awl

ārā: 13

ayana

half-year: 10

āyatta

depends on: 8

āyur

life, longevity: 5

āyurveda

the science of life: 5

baddham

bound, connected: 17  
*balā*  
country mallow: 22  
*bala*  
strength: 8  
balm  
*tarpaṇa*: 18, 23f  
*bandha*  
bindings: 15  
beauty berry  
*priyaṅgu*: 23  
beautyberry  
*priyaṅgu*: 19  
bent brow and eye  
*vakrabhrūnetra*: 27  
*bhaṅga*  
leaves: 26  
*bhavet*  
it may be: 25  
*bhāvita*  
cooked: 24  
infused: 19  
*bhedya*  
splitting: 15  
bile  
*pitta*: 21  
bindings  
*bandha*: 15  
black part  
*kṛṣṇa*: 26  
black pepper  
*marica*: 19  
black soot  
*maṣī*: 18  
blessings pronounced  
*svastivācana*: 13  
blindness  
*timira*: 25  
blink of the eye  
*nimeṣa*: 9  
blood  
*rudhira*: 9  
*śonita*: 21  
blood-bile

*śonita-pitta*,  
*rakta-pitta*: 21  
blood-letting  
*sirāvedha*: 18  
bloodshot blindness  
*rāgin timira*: 23  
*rāgiṇi timire*: 25  
blue dot cataract  
*mlāyin*: 24  
blue lotus  
*utpala*: 19  
blue vitriol  
*tuttha*: 23  
bones  
*asthi*: 10  
born from eggs  
*aṇḍaja*: 9  
born in in a caul  
*jarāyujā*: 9  
born of sweat  
*svedaja*: 9  
bound, connected  
*baddham*: 17  
box myrtle  
*kaṭphala*: 20  
*bṛṇhaṇa*  
nourishment: 8  
bubbling  
*budbuda*: 28  
*budbuda*  
bubbling: 28  
bulbs  
*kanda*: 9  
*cala*  
liquid: 26  
cardamom  
*elā*: 20  
*carman*  
pelt: 9  
carnivore  
*kravyabhuj*: 22  
cassia cinnamon  
*patra*: 28  
castor oil  
*pañcāṅgulataila*: 21

castor oil tree  
*gandharvahaṣṭa*: 13  
cataract  
*liṅganāśa*: 25  
*caturvarga*  
fourfold grouping:  
10  
*catuṣṭaya*  
four factors: 10  
caused by wind  
*pavanodbhava*: 21  
causing the destruction  
of actions such as  
moving  
*gamanādikriyāv-*  
*ināśakārī*: 27  
chebulic myrobalan  
*abhayā*: 20  
*chedya*  
cutting: 15  
excision: 11  
*chidra*  
hole: 26  
circuit of the pupil  
*drṣṭimaṇḍala*: 26  
citron  
*mātuluṅga*: 28  
clusters  
*samplava*: 9  
cock  
*tāmracūḍa*: 22  
collection  
*varga*: 10  
combined  
*upahita*: 21  
comfort  
*sukha* : 10  
complexion  
*varṇa*: 8, 29  
compounds  
*yoga*: 18  
compressed  
*saṃkṣipta*: 15  
compressed  
*saṃkṣipta*: 14

compressed  
*saṃkṣipta*: 14  
 conch  
*salilotthita*: 24  
 congested humours  
*sannipāta*: 11  
 convulsions  
*apatānaka*: 13  
 cooked barley  
*yavaudana*: 25  
 cooked  
*bhāvita*: 24  
 copper  
*tāmra*: 28  
*coṣa*  
 driness: 28  
 cotton  
*picu*: 15  
 counteraction  
*pratiśedha*: 18  
 country mallow  
*balā*: 22  
 cow's flesh  
*gomāṃsa*: 19  
 cow's urine  
*gomūtra*: 20  
 cow-dung  
*gośakṛt*: 19  
 creepy-crawlies  
*sarīsrpa*: 6, 9  
 curable  
*sādhya*: 18  
 cuscus grass  
*uśīra*: 23f  
 cutting  
*chedya*: 15  
 cutting with a blade  
*śastrakṣata*: 18  
 cuttle fish  
*arṇavamala*: 20  
 cuttlefish bone  
*samudraphena*: 20  
*dainya*  
 misery: 8  
 dais

*pīṭha*: 14  
*daivakṛte*  
 naturally  
 occurring: 26  
*dārvī*  
 tree turmeric: 19  
 day and night  
*ahorātra*: 9  
 decanted liquor  
*surāmaṇḍa*: 15  
 decoctions  
*kaṣāya*: 27  
 deer  
*eṇa*: 22  
 depends on  
*āyatta*: 8  
 depression  
*viśāda*: 8  
 desert date  
*iṅgudī*: 24  
 desire  
*icchā*: 8  
*dhānyāmla*  
 fermented  
 rice-water: 15  
*dhātrī*  
 emblic: 20  
*dhūmadarśin*  
 seeing smoke: 18  
 diet  
*āhāra*: 8  
 dilator  
*pravardhanaka*: 13  
 diligent  
*apramatta*: 17  
 disease  
*vyadhi*: 10  
*doṣa*  
 humour: 25  
 humours: 10  
*doṣapariplava*  
 unsteadiness of the  
 humours: 27  
 downward vision  
*adhodṛṣṭitva*: 28

*dravāñjana*  
 liquid collyrium:  
 23  
*dravya*  
 substance: 29  
 dried ginger  
*nāgara*: 20  
 driness  
*coṣa*: 28  
*drṣṭi*  
 pupil: 18, 26f  
*drṣṭimaṇḍala*  
 circuit of the pupil:  
 26  
 duct  
*sirā*: 13  
 ducts  
*sirā*: 10, 15  
*duḥkha*  
 suffering: 8  
*dūrvā*  
 panic grass: 28  
*duṣṭa*  
 tainted: 15  
*dveṣa*  
 hatred: 8  
 earthen products  
*pārthiva*: 9f  
 edge of the hole  
*apāṅga*: 16  
*elā*  
 cardamom: 20  
 elixir salve  
*rasāñjana*: 19, 23f  
 elixir-salve  
*rasāñjana*: 19  
 elixir-salve  
*śīta*: 19  
 embelia  
*vidaṅga*: 23  
 emblic  
*āmalaka*: 19  
*dhātrī*: 20  
*eṇa*  
 deer: 22



enclosed roasting  
*puṭākhyā*: 22  
*puṭapāka*: 24  
ends  
*vaktra*: 28  
energy  
*ojas*: 29  
entrails  
*antra*: 21  
envy  
*īrṣyā*: 8  
errhine  
*nasya*: 22  
essence  
*sāra*: 9  
evam  
along these lines:  
10  
excision  
*chedya*: 11  
expressed juice  
*svarasa*: 19  
external factors  
*āgantū*: 11  
extract of rohu carp  
*rauḥita*: 19  
extracts  
*rasa*: 23  
fat  
*vasā*: 22  
fermented rice-water  
*dhānyāmla*: 15  
filaments  
*kiñjalka*: 19  
flame of the forest  
*palāśa*: 23  
flavours  
*rasa*: 8, 29  
flesh  
*māṃsa*: 10  
*vadhra*: 17  
flowering trees  
*vrkṣa*: 9  
flowers  
*puṣpa*: 9

fortnight  
*pakṣa*: 10  
four factors  
*catuṣṭaya*: 10  
fourfold grouping  
*caturvarga*: 10  
free from clouds  
*abhramukta*: 26  
free from the point  
*agramukta*: 26  
frogs  
*maṇḍūka*: 9  
fruit trees  
*vanaspati*: 9  
fruits  
*phala*: 9  
*gāḍha*  
pinched: 15  
*gairika*  
ochre: 18f  
*gairikah*  
red chalk: 28  
*gamanādikriyāvināśakarī*  
causing the  
destruction of  
actions such as  
moving: 27  
*gandharvohasta*  
castor oil tree: 13  
gauze  
*prota*: 15  
general rule  
*paribhāṣā*: 23  
gently  
*mṛdu*: 28  
ghee  
*sarpis*: 18  
glassy opacity  
*kāca*: 23  
*godhā*  
monitor lizard: 21  
gold  
*śātakumbhī*: 28  
*gomāṃsa*  
cow's flesh: 19

*gomūtra*  
cow's urine: 20  
*gośakṛt*  
cow-dung: 19  
juice of cow-dung:  
19  
*granthi*  
lumps: 13  
*granthita*  
lumpy: 14  
greed  
*lobha*: 8  
green vitriol  
*kāsīsa*: 24  
grief  
*āśoka*: 8  
*guḍikā*  
pill: 19  
half-year  
*ayana*: 10  
hareṇu  
*hareṇu*: 20  
*hareṇu*  
hareṇu: 19f  
*hareṇu*  
hareṇu: 20  
*hareṇu*  
hareṇu: 19f  
*hareṇu*  
hareṇu: 19  
*hari*  
sun: 26  
*haridrā*  
turmeric: 24  
*harṣa*  
overexcitement: 8  
hatred  
*dveṣa*: 8  
herbs  
*oṣadhi*: 9  
*hīna*  
reduced: 17  
hole  
*chidra*: 26  
holostemma



*payasyā*: 28  
 honey collyrium  
*kṣaudrāñjana*: 20  
 honey  
*kṣaudra*: 19  
*madhu*: 19  
 horseradish tree  
*śigru*: 24  
 human being  
*puruṣa*: 8, 10  
 humour  
*doṣa*: 25  
 humours  
*doṣa*: 10  
 icchā  
 desire: 8  
 if, then not  
*na ced*: 25  
 illness  
*ruj*: 20  
 in those cases  
*tatra*: 21  
 incurable  
*asādhya*: 18  
 indian lotus  
*nalina*: 19  
 indian madder  
*mañjiṣṭhā*: 13, 28  
 indian sarsaparilla  
*kālānusāriva*: 20  
*sāriva*: 20  
*śārivā*: 28  
*indragopa*  
 red velvet mites: 9  
 inflamed  
*vidagdha*: 18  
 infused  
*bhāvita*: 19  
*ingudī*  
 desert date: 24  
 inherent factors  
*svabhāva*: 11  
 inherent  
*svābhāvika*: 8  
 injured

*utpīḍita*: 25  
 inspissation  
*rasakriyā*: 24  
 intended  
*vyākhyāta*: 11  
 irregularities  
*vaiṣamya*: 8  
 irrigation  
*seka*: 18  
 irritation  
*adhimantha*: 28  
*prakopa*: 10  
*īrṣyā*  
 envy: 8  
 it may be  
*bhavet*: 25  
 items created by time  
*kālakṛta*: 9f  
 jambu  
*jambū*: 19  
*jambū*  
 jambu: 19  
*jāṅgala*  
 arid-land animals:  
 24  
*jaṅgama*  
 moving: 9f  
*jarāyuja*  
 born in in a caul: 9  
 jealousy  
*asūyā*: 8  
 joins  
*sandhāna*: 13  
*sandhi*: 14  
 joints  
*sandhi*: 10  
 juice extract  
*svarasa*: 9  
 juice of cow-dung  
*gośakṛt*: 19  
 juices  
*rasa*: 22  
*kāca*  
 glassy opacity: 23

*kalā*  
 minutes: 9  
*kālakṛta*  
 items created by  
 time: 9f  
*kālānusāriva*  
 indian sarsaparilla:  
 20  
*kāma*  
 lust: 8  
*kanda*  
 bulbs: 9  
*kapālacūrṇa*  
 powdered  
 earthenware  
 crockery: 15  
*kapittha*  
 wood apple: 19  
*karma*  
 regimen: 27  
*karman*  
 therapies: 11  
*kārśmarī*  
 white teak: 19  
*kaṣāya*  
 decoctions: 27  
*kāśīsa*  
 green vitriol: 24  
*kāṣṭhā*  
 trice: 9  
*kaṭphala*  
 box myrtle: 20  
*khara*  
 rough: 27  
*kinihī*  
 white siris: 24  
*kiñjalka*  
 filaments: 19  
 knowledge  
*veda*: 5  
 kohl  
*srotas*: 22  
*srotoja*: 20  
*kravyabhuj*  
 carnivore: 22

*kriyā*  
 procedures: 7f, 11  
 treatment: 10, 24  
*kriyākāla*  
 the time for  
 therapies: 10  
*kriyāsaṅga*  
 loss of function: 27  
*kṛmi*  
 worms: 9  
*krodha*  
 anger: 8  
*kṛṣṇa*  
 black part: 26  
*kṛṣṇā*  
 long pepper: 18  
*kṛtamaṅgala*  
 received a  
 benediction: 13  
*kṣaṇadāndhya*  
 night blindness: 20  
*kṣāraka*  
 lye: 23  
*kṣaudra*  
 honey: 19  
*kṣaudrāñjana*  
 honey collyrium:  
 20  
*kṣīṇa*  
 wasted: 16  
*kṣīra*  
 sap: 9  
*kunta*  
 small insects: 9  
*kupyaka*  
 metal: 19  
*kuśa* grass  
*kuśa*: 23  
*kuśa*  
*kuśa* grass: 23  
 layer  
*paṭala*: 25  
 leaves  
*bhaṅga*: 26  
*patra*: 9

*lekhana*  
 scarification: 8  
*lekhya*  
 scarification: 15  
 life, longevity  
*āyur*: 5  
*liṅganāśa*  
 cataract: 25  
 liniment  
*ālepa*: 18  
 liquid  
*cala*: 26  
 liquid collyrium  
*dravāñjana*: 23  
 liquorice  
*madhuka*: 19  
*madhukair*: 28  
 liver extract  
*yakṛdrasa*: 20  
 liver  
*yakṛt*: 20f  
*lobha*  
 greed: 8  
 located  
*adhiṣṭhāna*: 8  
 lodh tree  
*lodhra*: 19, 23  
*lodhra*  
 lodh tree: 19, 23  
 long pepper  
*kṛṣṇā*: 18  
*māgadha*: 24  
*māgadhi*: 21  
*māgadhi*: 20, 23  
*pippali*: 19  
 loss of function  
*kriyāsaṅga*: 27  
 lumps  
*granthi*: 13  
 lumpy  
*granthita*: 14  
 lust  
*kāma*: 8  
*lūtā*  
 spiders: 6

lye  
*kṣāraka*: 23  
*madhu*  
 honey: 19  
*madhuka*  
 liquorice: 19  
*madhūka*  
 mahua: 22ff  
*madhukair*  
 liquorice: 28  
*madirā*  
 spirits: 20  
*madira*  
 spirits: 23  
*māgadha*  
 long pepper: 24  
*māgadhi*  
 long pepper: 20, 23  
*māgadhi*  
 long pepper: 21  
 mahua  
*madhūka*: 22ff  
 malice  
*mātsarya*: 8  
*māṃsa*  
 flesh: 10  
*māṃsanirgama*  
 prolapse: 28  
*manaḥśilā*  
 realgar: 20, 23f  
 red arsenic: 19f  
*mānasa*  
 mental: 8  
*maṇḍūka*  
 frogs: 9  
 mango  
*amra*: 19  
*mañjiṣṭhā*  
 indian madder: 13,  
 28  
*manyāstambhā*  
 paralysis of the  
 nape of the neck: 13  
*mardita*  
 massaged: 16

*marica*  
 black pepper: 19  
*māsa*  
 month: 10  
*maṣī*  
 black soot: 18  
 massaged  
*mardita*: 16  
*mātsarya*  
 malice: 8  
*mātuluṅga*  
 citron: 28  
 matured  
*vipakva*: 19  
 may repair  
*yojayed*: 17  
 medical advice  
*ācārīka*: 15  
 medicines cooked in a  
 crucible  
*puṭapāka*: 18  
 mental  
*mānasa*: 8  
*meṣaviṣāṇa*  
 periploca of the  
 woods: 21  
 metal  
*kupyaka*: 19  
 minutes  
*kalā*: 9  
 misery  
*dainya*: 8  
 misshapen eyeball  
*vilocana*: 27  
 mitigable  
*yāpya*: 25  
 mitigatible  
*yāpya*: 18  
*mlāyin*  
 blue dot cataract:  
 24  
 monitor lizard  
*godhā*: 21  
 month  
*māsa*: 10

moving  
*jaṅgama*: 9f  
*mṛdu*  
 gently: 28  
*mudga*  
 mung beans: 25  
*muhūrta*  
 three-quarters of  
 an hour: 9  
*muktā*  
 pearl: 25  
*muktvā*  
 separate: 25  
*mūla*  
 root: 8  
 roots: 9  
 mung beans  
*mudga*: 25  
*mūṣika*  
 rodents: 6  
 myrobalan  
*pathyā*: 19  
*na ced*  
 if, then not: 25  
*nadīja*  
 salt: 19  
*nāgara*  
 dried ginger: 20  
*nalada*  
 spikenard: 24  
*nalina*  
 indian lotus: 19  
 nasal medicines  
*nasya*: 18  
*nasya*  
 errhine: 22  
 nasal medicines: 18  
 naturally occurring  
*daivakṛte*: 26  
 nature  
*ātmaka*: 8  
 needle  
*sūcī*: 26  
 night blindness  
*kṣaṇadāndhya*: 20

*nimeṣa*  
 blink of the eye: 9  
*niryāsa*  
 resin: 9  
*niśācara*  
 nocturnal creature:  
 24  
*niṣevita*  
 prepared: 22  
 used: 21  
*nivāta*  
 no wind: 9  
 no wind  
*nivāta*: 9  
 nocturnal creature  
*niśācara*: 24  
 non-bloodshot  
 blindness  
*araga timira*: 25  
 non-flowering tree  
*vanaspati*: 24  
 nourishment  
*bṛmhaṇa*: 8  
 obstructed by blood  
*raktabaddha*: 15  
 ochre  
*gairika*: 18f  
 off his hand  
*sapāṇa*: 22  
 oil  
*sneha*: 9  
*ojas*  
 energy: 29  
 vital energy: 8  
 options  
*vikalpa*: 14  
*oṣadhi*  
 herbs: 9  
 remedies: 10  
*oṣadhī*  
 remedies: 8  
 outer corner of the eye  
*apāṅga*: 26  
 overexcitement  
*harṣa*: 8

pacification	caused by wind: 21	<i>prakṛti</i>
<i>saṁśamana</i> : 8	<i>payasyā</i>	temperament: 8
<i>upaśama</i> : 10	holostemma: 28	<i>pratīkāra</i>
pain and injury	pearl	alleviation: 10
<i>vedanābhighāta</i> : 5	<i>muktā</i> : 25	remedy: 18
<i>pāka</i>	pelt	<i>pratisandhā-</i>
septic: 15	<i>carman</i> : 9	put it back
<i>pakṣa</i>	periploca of the woods	together: 17
fortnight: 10	<i>meṣaviṣāṇa</i> : 21	<i>pratiśedha</i>
<i>palāśa</i>	<i>phala</i>	counteraction: 18
flame of the forest:	fruits: 9	<i>pratuda</i>
23	physical	scavenging: 16
<i>pallava</i>	<i>śārīravat</i> : 10	<i>pravardhanaka</i>
shoots: 26	<i>picu</i>	dilator: 13
<i>pañcāṅgulataila</i>	cotton: 15	<i>prayojanavat</i>
castor oil: 21	piercing	practical purposes:
panic grass	<i>vyadha</i> : 26	10
<i>dūroā</i> : 28	<i>vyadhana</i> : 15	prepared
paralysis of the nape of	pigs' eye	<i>niṣevita</i> : 22
the neck	<i>sūkarākṣitā</i> : 28	prepared with tilvaka
<i>manyāstambhā</i> : 13	pill	<i>tailvaka</i> : 18
<i>paribhāṣā</i>	<i>guḍikā</i> : 19	prepared with turpeth
general rule: 23	pinched	<i>traivṛta</i> : 18
<i>pārthiva</i>	<i>gāḍha</i> : 15	pressed
earthen products:	<i>pipīlika</i>	√pīd: 26
9f	ants: 9	<i>priyaṁgu</i>
partial blindness	<i>pippali</i>	beautyberry: 19
<i>timira</i> : 21	long pepper: 19	<i>priyaṅgu</i>
particulars	<i>pīṭha</i>	beauty berry: 23
<i>vikalpa</i> : 10	dais: 14	probe
parts	<i>pitta</i>	<i>śalākā</i> : 26
<i>aṅga</i> : 10	bile: 21	procedures
<i>paśu</i>	<i>plīhan</i>	<i>kriyā</i> : 7f, 11
animals: 9	spleen: 21	prolapse
<i>paṭala</i>	powdered earthenware	<i>māṁsanirgama</i> : 28
layer: 25	crockery	<i>prota</i>
<i>pāthā</i>	<i>kapālacūrṇa</i> : 15	gauze: 15
velvet leaf: 24	<i>prabha</i>	<i>puffed up</i>
<i>pathyā</i>	shine: 25	śopha: 16
myrobalan: 19	practical purposes	pupil
<i>patra</i>	<i>prayojanavat</i> : 10	<i>drṣṭi</i> : 18, 26f
cassia cinnamon:	<i>pragāḍha</i>	purification
28	steeped: 22	<i>saṁśodhana</i> : 8
leaves: 9	<i>prakopa</i>	<i>puruṣa</i>
<i>pavanodbhava</i>	irritation: 10	human being: 8, 10

*puṣpa*  
 flowers: 9  
 put it back together  
*pratisandhā-*: 17  
*puṭāhvaya*  
 taken hot: 23  
*puṭākhyā*  
 enclosed roasting:  
 22  
*puṭapāka*  
 enclosed roasting:  
 24  
 medicines cooked  
 in a crucible: 18  
*rāgin timira*  
 bloodshot  
 blindness: 23  
*rāgiṇi timire*  
 bloodshot  
 blindness: 25  
 rainy seasons  
*varṣā*: 9  
*rajana*  
 turmeric: 20  
*raktabaddha*  
 obstructed by  
 blood: 15  
*rasa*  
 extracts: 23  
 flavours: 8, 29  
 juices: 22  
 the blood of birds  
 and animals: 19  
*rasakriyā*  
 inspissation: 24  
*rasāñjana*  
 elixir salve: 19, 23f  
 elixir-salve: 19  
*rauhita*  
 extract of rohu  
 carp: 19  
 realgar  
*manaḥśilā*: 20, 23f  
 received a benediction  
*kṛtamaṅgala*: 13

red arsenic  
*manaḥśilā*: 19f  
 red chalk  
*gairikaḥ*: 28  
 red velvet mites  
*indragopa*: 9  
 reduced  
*hīna*: 17  
 regimen  
*ācāra*: 8  
*karma*: 27  
 remedies  
*oṣadhi*: 10  
*oṣadhī-*: 8  
 remedy  
*pratīkāra*: 18  
 resin  
*niryāsa*: 9  
 restrictions  
*yantrañā*: 27  
 rigid  
*sthirā*: 27  
 rodents  
*mūṣika*: 6  
*rohita*  
 rohita tree: 23  
 rohita tree  
*rohita*: 23  
 root  
*mūla*: 8  
 roots  
*mūla*: 9  
 rough  
*khara*: 27  
*ṛtu*  
 season: 10  
*rudhira*  
 blood: 9  
*ruj*  
 illness: 20  
*sādhubaddha*  
 well joined: 17  
*sādhya*  
 curable: 18  
*saindhava*

sind salt: 18, 20  
 sindh salt: 23  
 sal tree  
*śālā*: 19  
*śālā*  
 sal tree: 19  
*śalākā*  
 probe: 26  
*salilotthita*  
 conch: 24  
 “water-born”: 24  
 salt  
*nadīja*: 19  
*samāñjana*  
 “same collyrium”:  
 23  
*saṃkṣipta*  
 compressed: 14f  
 compressed: 14  
*samplava*  
 clusters: 9  
*saṃrambha*  
 angry: 16  
*saṃśamana*  
 pacification: 8  
*saṃśodhana*  
 purification: 8  
*samudraphena*  
 cuttlefish bone: 20  
*saṃvatsara*  
 year: 10  
*samyak*  
 simultaneous: 26  
*sañcaya*  
 accumulation: 10  
 sandal  
*sugandhi*: 21  
*sandhāna*  
 joins: 13  
*sandhi*  
 joins: 14  
 joints: 10  
*sannipāta*  
 congested  
 humours: 11

sap  
     *kṣīra*: 9  
*sapāṇa*  
     off his hand: 22  
*sāra*  
     essence: 9  
*śārīravat*  
     physical: 10  
*sarīṣṭpa*  
     creepy-crawlies: 6,  
     9  
*śārīvā*  
     indian sarsaparilla:  
     28  
*sāriva*  
     indian sarsaparilla:  
     20  
*śārīvā*  
     indian sarsaparilla:  
     28  
*sarpis*  
     ghee: 18  
*śastrakṣata*  
     cutting with a  
     blade: 18  
*śātakumbhī*  
     gold: 28  
*śatāvarī*  
     wild asparagus: 25  
*sauvīraka*  
     stibnite: 19  
 scarification  
     *lekhaṇa*: 8  
 scarification  
     *lekhyā*: 15  
 scavenging  
     *pratuda*: 16  
 scrambleberry  
     *tālīśa*: 19  
     *tālīśapatra*: 20  
 season  
     *ṛtu*: 10  
 sections  
     *adhyāya*: 11  
 seed-eating

*viṣkīra*: 16  
 seeing smoke  
     *dhūmadarśin*: 18  
*seka*  
     irrigation: 18  
 separate  
     *muktvā*: 25  
 septic  
     *pāka*: 15  
 shine  
     *prabha*: 25  
 shooting pain  
     *śūla*: 27  
 shoots  
     *pallava*: 26  
     *udbhīd*: 9  
 shrubs  
     *vīrudh*: 9  
*siddhārthaka*  
     white mustard: 28  
*śigru*  
     horseradish tree:  
     24  
 simultaneous  
     *samyak*: 26  
 sind salt  
     *saindhava*: 18, 20  
 sindh salt  
     *saindhava*: 23  
 sinews  
     *snāyu*: 10  
*sirā*  
     duct: 13  
     ducts: 10, 15  
*sirāvedha*  
     blood-letting: 18  
 siris  
     *śirīṣa*: 19  
*śirīṣa*  
     siris: 19  
*śīta*  
     elixir-salve: 19  
 skin  
     *tvak*: 9f  
 slice of flesh

*vadhra*: 17  
 small insects  
     *kunta*: 9  
*snāyu*  
     sinews: 10  
*sneha*  
     oil: 9  
 sniffing  
     *ucchiṅgana*: 26  
 solid  
     *styāna*: 26  
*śonita*  
     blood: 21  
*śonita-pitta, rakta-pitta*  
     blood-bile: 21  
*śonitena*  
     with blood: 27  
 śopha  
     puffed up: 16  
 spiders  
     *lūtā*: 6  
 spikenard  
     *nalada*: 24  
 spiral  
     *āvarta*: 25  
 spirits  
     *madira*: 23  
     *madirā*: 20  
 spleen  
     *plīhan*: 21  
 splitting  
     *bhedya*: 15  
*srāva*  
     suppurating: 15  
     suppuration: 16  
*śreyas*  
     welfare: 5  
*srotas*  
     kohl: 22  
*srotoja*  
     kohl: 20  
*stabdhā*  
     stiff: 14f  
 stalk  
     *vr̥nta*: 19

stationary  
*sthāvara*: 8, 10  
steeped  
*pragāḍha*: 22  
*sthāvara*  
stationary: 8, 10  
*sthirā*  
rigid: 27  
stibnite  
*añjana*: 23  
*sauvīra*: 19  
stiff  
*stabdha*: 14f  
stirred with goat's milk  
*ajāksīrārdita*: 28  
strength  
*bala*: 8  
strong mallow  
*atibālā*: 22  
*styāna*  
solid: 26  
substance  
*dravya*: 29  
substrate  
*āśrayin*: 8  
*sūcī*  
needle: 26  
suffering  
*duḥkha*: 8  
*sugandhi*  
sandal: 21  
*sūkarākṣitā*  
pigs' eye: 28  
*sukha*  
comfort: 10  
*śūla*  
shooting pain: 27  
sun  
*hari*: 26  
*suniviṣṭa*  
very intent: 17  
supernatant layer  
*agra*: 23  
suppurating  
*srāva*: 15

suppuration  
*srāva*: 16  
*surāmaṇḍa*  
decanted liquor: 15  
*svabhāva*  
inherent factors: 11  
*svābhāvika*  
inherent: 8  
*svarasa*  
expressed juice: 19  
juice extract: 9  
*svastivācana*  
blessings  
pronounced: 13  
*svayamigupta*  
velvet bean: 19  
*śvayathu*  
swelling: 13  
*sveda*  
born of sweat: 9  
swelling  
*śvayathu*: 13  
*syanda*  
watery eye: 25  
*tailasugandhi*  
the fragrant one in  
oil: 21  
*tailvaka*  
prepared with  
*tilvaka*: 18  
tainted  
*duṣṭa*: 15  
taken hot  
*puṭāhvaya*: 23  
*tālīśa*  
scramberry: 19  
*tālīśapatra*  
scramberry: 20  
*tāmra*  
copper: 28  
*tāmracūḍa*  
cock: 22  
*tarpaṇa*  
balm: 18, 23f  
*tatra*

in those cases: 21  
temperament  
*prakṛti*: 8  
the blood of birds and  
animals  
*rasa*: 19  
the fragrant one in oil  
*tailasugandhi*: 21  
the science of life  
*āyurveda*: 5  
the three fruits  
*triphalā*: 23  
the three spices  
*vyoṣa*: 20  
the time for therapies  
*kriyākāla*: 10  
therapies  
*karman*: 11  
three fruits  
*triphalā*: 18, 20  
three-quarters of an  
hour  
*muhūrta*: 9  
*timira*  
blindness: 25  
partial blindness:  
21  
*traivṛta*  
prepared with  
turpeth: 18  
treatment  
*kriyā*: 10, 24  
tree turmeric  
*dārvī*: 19  
trice  
*kāṣṭhā*: 9  
*triphalā*  
the three fruits: 23  
three fruits: 18, 20  
*trivṛt*  
turpeth: 21f  
turmeric  
*haridrā*: 24  
turmeric  
*rajana*: 20



turpeth  
     *trivrt*: 21f  
*tuttha*  
     blue vitriol: 23  
*tvak*  
     skin: 9f  
  
*ucchiṅgana*  
     sniffing: 26  
*udbhid*  
     shoots: 9  
 unsteadiness of the  
     humours  
     *doṣapariplava*: 27  
*upahita*  
     combined: 21  
*upaśama*  
     pacification: 10  
 used  
     *niṣevita*: 21  
*uśīra*  
     cuscus grass: 23f  
*utpala*  
     blue lotus: 19  
*utpīḍita*  
     injured: 25  
  
*vadhra*  
     flesh: 17  
     slice of flesh: 17  
*vaiṣamya*  
     irregularities: 8  
*vakrabhrūnetra*  
     bent brow and eye:  
     27  
*vaktra*  
     ends: 28  
*vanaspati*  
     fruit trees: 9  
     non-flowering tree:  
     24  
*varga*  
     collection: 10  
*varṇa*  
     complexion: 8, 29  
*varṣā*

    rainy seasons: 9  
*varti*  
     wick: 13  
*vasā*  
     fat: 22  
*veda*  
     knowledge: 5  
*vedanābhighāta*  
     pain and injury: 5  
 velvet bean  
     *svayaṃgupta*: 19  
 velvet leaf  
     *pāthā*: 24  
 very intent  
     *sunivīṣṭa*: 17  
*vidagdha*  
     inflamed: 18  
*vidaṅga*  
     embelia: 23  
*vikalpa*  
     options: 14  
     particulars: 10  
*vilocana*  
     misshapen eyeball:  
     27  
*vipakva*  
     matured: 19  
*vīrudh*  
     shrubs: 9  
*viṣāda*  
     depression: 8  
*viṣkira*  
     seed-eating: 16  
 vital energy  
     *ojas*: 8  
*vrkṣa*  
     flowering trees: 9  
*vrnta*  
     stalk: 19  
*vyadha*  
     piercing: 26  
*vyadhana*  
     piercing: 15  
*vyadhi*  
     disease: 10

*vyākhyāta*  
     intended: 11  
*vyāla*  
     wild animals: 9  
*vyoṣa*  
     the three spices: 20  
  
 wasted  
     *kṣīṇa*: 16  
 watery eye  
     *syanda*: 25  
 welfare  
     *śreyas*: 5  
 well joined  
     *sādhubaddha*: 17  
 white mustard  
     *siddhārthaka*: 28  
 white siris  
     *kinihī*: 24  
 white teak  
     *kārśmarī*: 19  
 wick  
     *varti*: 13  
 wild animals  
     *vyāla*: 9  
 wild asparagus  
     *śatāvarī*: 25  
 with blood  
     *śonitena*: 27  
 wood apple  
     *kapittha*: 19  
 worms  
     *kṛmi*: 9  
  
*yakṛdrasa*  
     liver extract: 20  
*yakṛt*  
     liver: 20f  
*yantraṇā*  
     restrictions: 27  
*yāpya*  
     alleviated: 21  
     mitigable: 25  
     mitigatable: 18  
*yavaudana*  
     cooked barley: 25

year  
    *saṃvatsara*: 10  
*yoga*  
    compounds: 18

*yojayed*  
    may repair: 17  
*yuga*  
    yuga: 10

yuga  
    *yuga*: 10

## Index of Manuscripts

*The numbers after the colon refer to pages in this document.*

Kathmandu, KL 699: 1  
Kathmandu, NAK 1-1079: 1  
Kathmandu, NAK 5-333: 1

Mumbai, AS B.D.109: 4  
Mumbai, AS B.I.3: 4  
Thanjavur TMSSML 10773: 30