A Translation of the Nepalese Text of the Suśrutasaṃhitā

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Sūtrasthāna 1: The Origin of Medical Knowledge

Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.¹

Translation

- 1 Now I shall narrate the chapter on the origin of this knowledge.²
- 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.³

¹ HIML: IA, 203–204.

² Dalhaṇa 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 Suśrutasaṃhitā (wuja-2013kleb-2021brai-2019birc-2021). On the figure of Dhanvatari in medical literature, see HIML: IA 358–361.

³ 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-trikamji2**), and was not included in HIML amongst "authorities mentioned in the *Suśrutasaṃhitā*." 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 *Suśrutasaṃhitā* that cites them.

- "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."
- The Lord said to them:
 "Welcome to you! My children, all of you are beyond reproach and worthy to be taught.
- "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.⁴
- 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.
- "[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.
- "[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.
- "[The component] called knowledge of spirits is for appeasing demons by pacification rites and making food offerings for those whose minds

⁴ Svayambhū is another name for Brahmā, the creator.

have been possessed by gods, their enemies,⁵ Gandharvas, Yakṣas, demons, deceased ancestors, Piśācas, Vināyakas, ⁶ Nāgas and evil spirits that possess children.

- "[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.
- "[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.⁷
- "[The component] called the discipline of rejuvenation is maintaining youth, bringing about a long life and mental vigour and for curing diseases.
- "[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.
- "Thus, this Ayurveda 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."
- 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."
- "Now, as is well-known, the aim of Ayurveda 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),

Dānavas. The insertion marks ($k\bar{a}kapadas$) below the text at this point appears to be by the original scribe.

The vulgate doesn't have *vināyaka*s but does add *asuras*, probably under the influence of Dalhaṇa. Cite Paul Courtright, 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 ($l\bar{u}t\bar{a}$) and creepy-crawlies ($sar\bar{s}rpa$) in the list, it does seem that MS K had a shorter list, and the vulgate edition adds rodents ($m\bar{u}sika$).

- which is being taught in accordance with tradition, perception, inference and analogy.
- "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.'
- "And also, of the eight disciplines of \bar{A} yurveda, [surgery] alone is the best because of the quick action of its procedures ($kriy\bar{a}$), its application of blunt instruments, knives, caustics and fire, and it is common to all disciplines.
- "Therefore, [surgery] is eternal, meritorious, leads to heaven, brings renown, bestows a long life, and affords a livelihood.
- "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.].8

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.9

In this context, as far as this discipline is concerned, a human being $(puru \not sa)$ is called an amalgam of the five elements and the embodied soul. This is where procedures $(kriy \bar a)$ apply. This is the locus. Why?

Because of the duality of the world, the world is twofold: the stationary and the moving. Its nature ($\bar{a}tmaka$) is twofold, depending on the preponderance of Agni and Soma.¹⁰ 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".¹¹ 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.

This fourfold classification of beings is paralleled with closely-related vocabulary in *Bhelasaṃhitā* 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.¹²

The mental $(m\bar{a}nasa)$ ones, caused by desire $(icch\bar{a})$ and hatred (dveṣa), include: anger (krodha), grief $(\bar{a}śoka)$, misery (dainya), overexcitement (harṣa), lust $(k\bar{a}ma)$, depression $(viṣ\bar{a}da)$, envy $(\bar{i}rṣy\bar{a})$, jealousy $(as\bar{u}y\bar{a})$, malice $(m\bar{a}tsarya)$, and greed (lobha).

The inherent $(sv\bar{a}bh\bar{a}vika)$ ones are hunger, thirst, old age, death, sleep and those of the temperament (prakrti).

These too are located (adhiṣṭhāna) in the mind and body.

Scarification (lekhana), nourishment (bṛmhaṇa), purification (saṃśod-hana), pacification (saṃśamana), diet ($\bar{a}h\bar{a}ra$) and regimen ($\bar{a}c\bar{a}ra$), properly employed, bring about their cure.

- Furthermore, food is the root $(m\bar{u}la)$ of living beings as well as of strength (bala), complexion (varna) and vital energy (ojas). It depends on $(\bar{a}yatta)$ the six flavours (rasa). Flavours, furthermore, have substances as their substrate $(\bar{a}\acute{s}rayin)$. And substances are remedies $(o\dot{s}adh\bar{\iota}-)$. There are two types: stationary $(sth\bar{a}vara)$ and moving (jangama).
- Of these, there are four types of stationary ones: fruit trees (*vanaspati*), flowering trees (*vṛkṣa*), herbs (*oṣadhi*) and shrubs (*vīrudh*).¹⁴ Amongst these, the "fruit trees" have fruit but no flowers.¹⁵ The "flowering trees" have flowers and fruit. The "herbs" die when the fruit is ripe. "Shrubs" put out shoots.

¹² Note that four humoral substances are assumed here.

¹³ Pāṇini 6.3.132 provides that the final vowel of the noun oṣadhi may be lengthened $(\to oṣadh\bar{\imath})$ 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 $oṣadh\bar{\imath}$. This form is in fact not uncommon in medical literature as well as in epics, purāṇas, smṛtis, and other parts of Sanskrit literature.

¹⁴ 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.

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**).

- As is well known, moving remedies are also of four types: those born in in a caul (<code>jarāyuja</code>), those born from eggs (<code>aṇḍaja</code>), those born of sweat (<code>svedaja</code>), and shoots (<code>udbhid</code>). Amongst these, those born in a caul include animals (<code>paśu</code>), humans, and wild animals (<code>vyāla</code>). Birds, creepycrawlies (<code>sarīsṛpa</code>) and snakes are "born of eggs." Worms (<code>kṛmi</code>), small insects (<code>kunta</code>) and ants (<code>pipīlika</code>) and others are born of sweat. ¹⁶ Shoots include red velvet mites (<code>indragopa</code>) and frogs (<code>maṇḍūka</code>). ¹⁷|
- In this context, among the stationary remedies, skin (tvak), leaves (patra), flowers (puṣpa), fruits (phala), roots ($m\bar{u}la$), bulbs (kanda), sap ($kṣ\bar{u}ra$), resin ($niry\bar{u}sa$), essence ($s\bar{u}ra$), oil (sneha), and juice extract (svarasa)¹⁸ are useful; among the moving remedies pelt (carman), hair, nails, and blood (rudhira) and so forth.
- And earth products (*pārthiva*) include gold and silver. 19
- The items created by time $(k\bar{a}lakrta)$ are clusters (samplava) as far as wind and no wind $(niv\bar{a}ta)$, heat and shade, darkness and light and the cold, hot and rainy seasons $(vars\bar{a})$ are concerned. The divisions of time are the blink of the eye (nimesa), a trice $(k\bar{a}sth\bar{a})$, minutes $(kal\bar{a})$, three-quarters of an hour $(muh\bar{u}rta)$, a day and night $(ahor\bar{a}tra)$, a fortnight (paksa), a month $(m\bar{a}sa)$, a season (rtu), a half-year (ayana), a year (samvatsara), and yuga (yuga).
- 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:]²¹

This fourfold category is taught by physicians as a cause for the agitation and quelling of bodily diseases.²²

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; Dalhaṇa on 4.10.12 (**vulgate**).

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

²⁰ These units are presented at 1.6.5 (vulgate) and discussed by haya-2017.

²¹ See footnote 8.

²² On the topic of the "group of four," the commentator Dalhana 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 Jejjaṭa (HIML: IA, 372–3, 192). In his view, these early commentators do not agree that the fourfold grouping

There are two kinds of invasive diseases. Some certainly²³ affect ($ni\sqrt{pat}$) the mind, others the body. Their treatment (kriyā) is of two kinds too.

- For those that affect the body there is physical (śārīravad) 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 (*catuṣtaya*) is given:
 - human being (puruṣa),
 - disease (vyadhi),
 - 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 (āgantu) 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 $(kriy\bar{a})$," 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:]²⁴

This seed of medicine has been declared in brief. Its explanation will be given in one hundred and twenty chapters.²⁵

⁽*caturvarga*) refers to the quartet of stationary ($sth\bar{a}vara$), moving (jangama), earthen products ($p\bar{a}rthiva$) and items created by time ($k\bar{a}lakrta$) (**vulgate**).

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-*,

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

[There is a verse about this:]²⁸

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.

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

²⁶ On viṃśa in the sense of "greater by 20" see P.5.2.46 śadantaviṃśateś ca.

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 (vulgate) there is indeed a statement that picks up the point about there being 120 chapters.

²⁸ See footnote 8.

Sūtrasthāna 2: The Initiation of a Student

Literature

HIML: IA, 204**prei-2007wujad-2012**.

Translation

1

Sūtrasthāna 3: The Table of Contents

Literature

Translation

1

Sūtrasthāna 13: On Leeches

Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of studies on Indian leeches and their application.²⁹

A Persian version of this chapter of the *Suśrutasaṃhitā* was included in *Sikandar Shāh's Mine of Medicine* ($Ma'din al-\underline{shifa'}$ i $Sikandar-\underline{Sh}\bar{a}h\bar{\iota}$) composed in 1512 by Miyān Bhūwah b. <u>Kh</u>awāṣṣ <u>Kh</u>ān.³⁰

More recently, Brooks has explored the sense of touch in relation to leeching and patient-physician interactions.³¹

Translation

- 1 And now we shall explain the chapter about leeches.
- 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 be made to flow by any of them in their particular way.³²

²⁹ HIML: IA, 209; IB, 324, n. 131.

³⁰ sidd-1959azee-1971stor-1971HIML: IB, 324, n. 128spez-2019.

³¹ broo-2020; broo-2020b; broo-2020c; broo-2021.

³² This sentence is hard to construe grammatically, although its meaning seems clear. In place of विशेषस्तु, Cakrapāṇidatta and Dalhaṇa both read विशेषतस्, which helps interpretation (acar-1939, vulgate). It is notworthy 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.³³
- 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.³⁴
 - 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.³⁵
 - 7 A gourd is well known for being pungent, dry and sharp. So when someone is afficted 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.³⁶
 - 9 Leeches are called "jala-ayu-ka" because water (jala) is their life ($\bar{a}yur$). "Home" (okas) means "dwelling;" their home is water, so they are called "water-dwellers (jalaukas)."
 - There are twelve of them: six are venomous and just the same number are non-venomous.
 - 11 Here is an explanation of the venomous ones, together with the therapy:

⁽vulgate) as विशेषतस्तु विस्नाव्यं शृङ्गजलौकालाबुभिर्गृह्णीयात्. This insertion is not included in the earlier edition of the vulgate, but is replaced by स्निग्धशीतरूक्षत्वात् (susr-trikamji2). Dalhaṇa noted that, "this reading is discussed to some extent by some compilers (नि-बन्धकार), but it is definitely rejected by most of them, including Jejjhaṭa."

³³ The vulgate replaced "smooth" with "hot."

This passage is not found in the vulgate, but it is similar to the passage cited by Palhaṇa at 1.13.8 (**vulgate**) and attributed to Bhāluki. Bhāluki was the author of a *Bhālukitantra* that may have predated Jejjaṭa and might even have been one of the sources for the *Suśrutasaṇhitā* (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 (**vulgate**).

Note that the particular qualities (*guṇas*) of the leech in this and the following verses counteract the quality of the affliction. See **broo-2018**.

³⁶ 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.

³⁷ This is a folk etymology.

- Black (kṛṣṇā)
- Mottled (karburā)
- Sting-gush (alagarddā)³⁸
- Rainbow (*indrāyudhā*)
- Oceanic (*sāmudrikā*)
- Cow-praising (*govandanā*)³⁹

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 ($mah\bar{a}gada$) should be applied in drinks and liniments ($\bar{a}lepana$), etc.⁴⁰ 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.⁴¹
 - Tawny (*kapilā*)
 - Ruddy (pingalā)
 - Dart-mouth (śańkumukhī)
 - Mouse (mūsikā)

³⁸ Treating गर्दा as गल्दा and translating as in RV 8.1.20, with jami-2014. But if गर्द is to be taken from $\sqrt{\eta}$ then we might have "crying from the sting."

³⁹ The manuscripts all read गोवन्दना against the vulgate's गोचन्दना.

⁴⁰ The "Great Antidote" is described in the Kalpasthāna, at 5.5.61–63ab (**vulgate**). Dalhaṇa and the vulgate included errhines in the list of therapies, and Dalhaṇa added that "etc." indicated showers and baths too.

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

- Lotus-mouth (puṇḍarīkamukhī)
- 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.⁴²
- 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.43 Those in

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."

Dalhana on 1.13.13 (vulgate) anachronistically identified "Yavana" as the land of

⁴² The compound स्निग्धमुद्भवण्णी is supported by all the manuscript witnesses and is translated here. Nevertheless, the reading of the vulgate, that separates स्निग्धा, f., "slimy" as an adjective for the leech, seems more plausible: "it is slimy and the colour of a mung bean."

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 toponymn. 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.

- particular have large bodies and are strong, they drink rapidly, consume a lot, and are without venom.
- In that context, the venomous leeches are those originating in decomposing venomous insects, frogs, urine, feces and in polluted water.⁴⁴ 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 $mud.^{45}$

- 16 They can be caught with a fresh hide or after being caught in other ways.⁴⁶
- 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:

the Turks (নুমজ্জ) and "Pautana" as the Mathurā region. He also noted, as did Cakrapāṇidatta (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.

- 44 The vulgate on 4.13.14 (vulgate) includes fish in this list.
- 45 Dalhaṇa on 1.13.14 (**vulgate**) 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. Dalhaṇa's suggestion at 4.23.4 (**vulgate**) that विरुद्ध refers to the chapter on wholesome and unwholesome foods (हिताहिताध्याय, 1.20 (**vulgate**)).
- 46 "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 गृह्णी-यात् "one may grasp (by other means)." This is hard to construe clearly.
 - Dalhana on 1.13.15 (**vulgate**) 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,⁴⁷ or thin, those that are not born in the proper habitat, those that will not attach, that drink little or those that are venomous.

- 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 (śastrapada).⁴⁸ And if it still will not attach, make other ones attach.
- 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.
- 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.
- 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. 49 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.⁵⁰ One that protects its deflated head with its body, suddenly curls up and makes the water warm is traditionally said to have Indrapada.

⁴⁷ Pace Dalhaṇa on 1.13.18 (vulgate) who glossed अमनोज्ञदर्शन as "nasty looking."

⁴⁸ On पद as a "mark," "imprint," or "place of application," cf. 4.1.29 (vulgate), 5.4.15 (vulgate), etc. See footnote 418.

⁴⁹ The expression शालितण्डुलकाण्डन, "rice-grain chaff" could be read as "unhusked rice, rice grains and chaff" but this seems unlikely in the context.

⁵⁰ The Nepalese witnesses read इन्द्रपद/इन्द्रापद, but the vulgate reads इन्द्रपद, 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.⁵¹

After observing the proper or improper flow of the blood, one should rub the opening made by the leech with honey.⁵² 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.

51 The vulgate includes "well purged" as the object in this sentence, which makes better sense.

⁵² In the Nepalese witnesses, the object of this passage is जलोकामुखम् "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.⁵³

Translation

1 Now we shall declare the chapter about blood.

2

- Food is of four types.⁵⁴ It is endowed with six tastes and is made of the five elements.⁵⁵ It has either two or eight potencies, and is endowed with many qualities. ⁵⁶ 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 sideways—and doing so day after day owing to the reaction of past
- 53 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 discussed Sanskrit veterinary texts in the light of their standard theory of four humours, including blood.
- 54 Dalhaṇa on 1.14.3 (**vulgate**) said that the four types of food are those that can be drunk, licked, eaten and chewed(पेयलेह्यभोज्यभक्ष्य). The main text of the *Carakasaṃhitā* is explicit about these categories, 4.3.4(1) (**cara-trikamji3**): पानाशनभक्ष्यलेह्य। "things drunk, eaten, chewed or licked." On the distinction of भक्ष्य/भोज्य, see **yagi-1994**; for further background on foods, see **oliv-2001**.
- 55 *Idem*, Earth, water, fire, air, space
- 56 Dalhaṇa related these qualities to the twenty standard गुण of āyurveda; see, e.g., their listing by Vāgbhaṭa, translated by wuja-2003.

activities that are caused by the invisible,⁵⁷ it satisfies the entire body, enlivens it, prolongs it,⁵⁸ 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 flowing⁵⁹ and due to attributes such as mobility, lubrication, enlivening, satisfaction, and supporting.⁶⁰

- 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.

- 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.⁶¹ That is due to the embryo being fiery and moist.⁶²
- 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.

⁵⁷ সম্ভ (unseen): Doing any righteous or unrighteous action produces good merit and demerit respectively. This good merit and demerit are called সম্ভ (invisible) because it cannot be directly known but can only be assumed through logical deduction.

⁵⁸ In the sense of prolonging its lifespan

⁵⁹ 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."

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**.

Dalhaṇa commented that this is to distinguish the menstrual blood from regular blood that is gentle.

⁶² Dalhaṇa 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.

- 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 preserve⁶³ chyle by administering food and drink, being nicely disciplined with food⁶⁴.

- The verbal root *rasa* means movement.⁶⁵ Because it keeps moving day after day, it is called *rasa* (chyle).⁶⁶
- 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 group⁶⁷ is 18,090.

This is the particular transformation period regarding chyle that lasts for a person with mild fire⁶⁸. For a person with developed fire, one should know it to last for the exact same time⁶⁹

⁶³ All three manuscripts have रक्षेत which is an incorrect form. रक्षेत् is the correct form.

⁶⁴ 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.

⁶⁵ kunj-1907

⁶⁶ In the list of verbal roots of Pāṇini, the verbal root रस(rasa) means taste and moistening. It does not mean movement.

⁶⁷ duration of chyle in all the body tissues as a whole

⁶⁸ Perhaps this refers to the digestive fire.

Although the vulgate does not have this verse, there is an argument presented in Palhaṇa's commentary on 1.14.16 (**vulgate**) 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. Palhaṇa said that this opinion is refuted by Gayadāsa Ācārya in many different ways. Palhaṇa 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.

- Resembling the expanse of sound, flame, and water, that entity moves along in a minute manner throughout the entire body⁷⁰.
- 17 The aphrodisiac medicines, however, being used like a purgative due to their excessively strong characteristics, evacuate the semen.
- 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 entities⁷¹, it,⁷² 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 age⁷³. 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.
- These entities are called body tissues ($dh\bar{a}tu$ -s) because they bear the body⁷⁴.
- 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 blood⁷⁵ 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

⁷⁰ Dalhana comments (**vulgate**) that the expanse of sound indicates the sideways movement of chyle, the expanse of flame indicates the upward movement of chyle, and the expanse of water indicates the downward movement of chyle.

⁷¹ This is the doctrine of pre-existence of the effect (सत्कार्यवाद, satkāryavāda) first propounded by Sāṅkhya philosophers.

⁷² fragrance

⁷³ 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.

⁷⁴ 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.

vulgate 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."

- 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 section.
- 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.
- In that regard, one should quickly insert the surgical instrument that is simple, not very close, fine, uniform, not deep, and not shallow.
- 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.
 - 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.
- 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), $\bar{a}g\bar{a}radh\bar{u}ma$, 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.

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 dhanvana (Camelthorn), or a linen cloth⁷⁶, 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 soup⁷⁷. The physician should treat the pains as mentioned.

36a Here are verses about this.

When blood flows out due to the decay of body tissue, fire becomes weak⁷⁸ 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 con-

⁷⁶ **vulgate** has क्षौमेण वा ध्मापितेन - "with linen reduced to ashes". Presumably, it is this ash that is also referred to in item 40.

⁷⁷ Based on Dalhana's comment as found in vulgate

⁷⁸ This refers to the digestive fire.

41ab-cd	tracts the blood vessel. If the blood does not coagulate, the physician should employ joining. If the blood does not stop by joining the opening then he should
42ab-cd	employ haemostasis. 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 ⁷⁹ 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.

⁷⁹ Dalhaṇa comments (vulgate) 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 2002.⁸⁰ 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. 81

81 The topic of piercing the ear (kaṛnavyadha) is not discussed in the Carakasaṃhitā (HIML: IB, 326, n. 175), but it is mentioned in some texts that followed the Suśrutas-aṃhitā, such as the Kaśāpyasaṃhitā (HIML: IIA, 30). Also, the instrument for piercing the ear is described in the Aṣṭāṅgahṛdayasaṃhitā 1.26.26 (kunt-1939). In the versions of the text known to Dalhaṇa (vulgate) and Cakrapāṇidatta (acar-1939), the heading of this chapter is "the method of piercing and joining the ear" (कर्णव्यधनस्विधि), instead of the Nepalese version's "the method of piercing the ear" (कर्णव्यधनिधि). 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, Dalhana (vulgate) 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

⁸⁰ HIML: IA, 211–212317.

- 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, 82 on the lap of a wetnurse.83 Then, he should pull the ear with his left hand and pierce straight through with his right hand at a naturally-occurring cleft.84 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.85
- 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.⁸⁶
- 4 In this context, if an ignorant person randomly pierces a duct there will
 - who are free of disease at these times, their ear flaps and apertures, as well as limbs, increase" (1.16.1 (vulgate)).
 - Some texts use the adjective कर्ण-वेधनी rather than ॰व्यधनी.
- 82 The causative form व्यथ्येत् 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 (vulgate). Cf. also 3.10.8, 24 (vulgate) that have slightly different formulations.
- 83 The versions of 1.16.3 known to Cakrapāṇidatta (acar-1939) and Dalhaṇa (vulgate) have the additional compound কুमাरधराङ्के ("on the lap of one who holds the child") after धात्र्यङ्के. The gender of कुमारधर is made clear by Dalhaṇa's gloss "a man who holds the child." Also, both versions add बालक्रीडनकेः 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 Dalhaṇa on 1.16.3 (vulgate), the toys include replica elephants, horses, bulls and parrots. Dalhaṇa further mentions that others read भक्ष्य-विशेषवी ("or by special treats") before बालक्रीडनकेः, but we see no trace of these small kindnesses in our witnesses.
- 84 The versions of 1.16.3 of Cakrapāṇidatta (acar-1939) and Dalhaṇa (vulgate) 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 absolutives.
- 85 Dalhaṇa on 1.16.3 (**vulgate**) clarifies that the awl is a shoe-maker's knife for piercing leather. He also cites the authority of "the notes of Lakṣmaṇa" (*Lakṣmaṇaṭippaṇaka*) 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 *Suśrutasaṃhitā* that was available to Dalhaṇa in twelfth-century Bengal. See Meulenbeld (HIML: IA, 386).
- 86 At this point, MS Kathmandu KL 699 is missing a folio, so the rest of this chapter is constructed on the basis of witnesses MS Kathmandu NAK 5-333 and MS Kathmandu

be fever, burning, swelling, pain, lumps, paralysis of the nape of the neck, convulsions, headache or sharp pain in the ear.⁸⁷

- Having removed the wick (*vartti*) because of the accumulation of humours or an unsatisfactory piercing at that location, ⁸⁸ 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. ⁸⁹
- 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.⁹⁰
- 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.⁹¹

NAK 1-1079.

- 87 This passage is significantly augmented in Cakrapāṇidatta's and Dalhaṇa'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 (vulgate) 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.'
- 88 In addition to these reasons, Dalhaṇa at 1.16.6 (vulgate) added "because of piercing with a painful, crooked and unsatisfactory needle" (ক্লিष্टजिह्माप्रशस्तसूचीव्यधात्) and "because of a wick that is too thick" (गाढतरवर्तित्वात्). Dalhaṇa was aware of the reading in the Nepalese version because in his commentary on 1.16.6 (vulgate) he noted that some read "because of the accummulation 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.
- 89 The description of the drug is ambigious: 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.
- 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**).
- 91 Cakrapāṇidatta on 1.16.6 (acar-1939) and Dalhaṇa on 1.16.8 (vulgate) pointed out that the dilator can be made of wood, such as that of the prickly chaff-flower, the neem tree and tree cotton. Dalhaṇa added that it can also be made of lead and should have the shape of the datura flower. The manuscripts have variant readings for लघुप्र-

- 8 A person's ear enlarged in this way can split in two, either as a result of the humours⁹² 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. 93 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 (kākaustha). 94

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.⁹⁵

Take-away: the flaps are missing, in fact, on both sides.

Ready-split: the flaps are like a dais (pīṭha).

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.

वर्धनकमामुञ्चेत् at this point that include a scribal emendation, none of which construe plausibly. It is possible that the unusual verb form आ+\/ मृच् puzzled the scribes and caused the implausible scribal readings and emendations.

⁹² Dalhaṇa on 1.16.9 (**vulgate**) 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.

⁹³ 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 Dalhaṇa's version (vulgate) 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.

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**).

⁹⁵ 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. 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 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. See the suppurating of the swollen.

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.⁹⁹ And in this regard, he should particularly gather¹⁰⁰ top layer of fermented liquor, milk, water, fermented rice-water, and powdered earthenware crockery (*kapālacūrṇa*).¹⁰¹

⁹⁶ Cakrapāṇidatta on 1.16.9–13 (**acar-1939**) and Dalhaṇa on 1.16.10 (**vulgate**) provide examples of how the names of these joins describe their shapes. For example, the rim-join (*nemīṣandhānaka*) is similar to the join of the rim of a wheel (*cakradhārā*).

⁹⁷ Dalhaṇa on 1.16.10 (**vulgate**) 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.

⁹⁸ The version of 1.16.11–13 known to Dalhaṇa (**vulgate**) has four verses (रलोक) 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 चित्यउन्ति). However, in Trikamajī Ācārya's edition of the *Sūtrasthāna* of the *Bhānumatī*, the root text is largely identical to the one commented on by Dalhaṇa (**vulgate**), 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.

⁹⁹ *Suśrutasaṃhitā* 1.5 (**vulgate**), probably verse 6 especially, that lists the equipment and medications that a surgeon should have ready.

¹⁰⁰ The reading in the Nepalese manuscripts of विशेषतश्वाग्रोपहरणीयात् has been emended to विशेषतश्वाग्रोपहरेत् to make sense of the list of ingredients, which is in the accusative case. Also, the repetition of अग्रोपहरणीयात् in the Nepalese version suggests that its second occurrence, which does not make good sense here, is a dittographic error.

¹⁰¹ The term कपालचूर्ण is unusual. Dalhaṇa (vulgate) 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. 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 ($\bar{a}c\bar{a}rika$). And he should supplement with food as taught in the "Two Wound" chapter.¹⁰³

- One should avoid rubbing, sleeping during the day, exercise, overeating, sex, getting hot by a fire, or the effort of speaking.
- One should not make a join when the blood is too pure, too copious, or too thin. For when the ear is tainted by wind, then it is obstructed by blood, unhealed and will peel. When tainted with choler, is becomes pinched $(g\bar{a}dha)$, 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 $(k\bar{s}\bar{\imath}na)$ flesh and it will not grow. 105
- 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.

¹⁰² There are syntactic difficulties in this sentence. We have adopted the reading in Dalhaṇa's version (**vulgate**), which has च कृत्वा following सुपरिगृहीतं. It is likely that a verb, such as कृत्वा, dropped out of the Nepalese transmission.

¹⁰³ Suśrutasaṃhitā 4.1 (vulgate).

^{104 1.16.17} of Dalhaṇa's version (**vulgate**) 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 Dalhaṇa's version.

¹⁰⁵ In his edition of Suśrutasaṃhitā, Ācārya (vulgate) 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 परिषेचयेत्तरात्राञ्च पिचुं परिवर्तयेत्).

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, ¹⁰⁶ fat, marrow, milk, and sesame oil, and white mustard oil. ¹⁰⁷ 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. ¹⁰⁸ 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. 109
- 16 Ears which do not enlarge even when sweated and oiled, should be scarified at the edge of the hole, but not outside it.¹¹⁰
- 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. 111

106 For such classifications, see the analyses by zimm-1999 and smit-1994.

- 107 Dalhaṇa's version of 1.16.19 (**vulgate**) includes ghee. However, Dalhaṇa'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. Dalhaṇa 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.
- 108 The version of of this verse known to Dalhaṇa (vulgate (vulgate)) 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, Dalhaṇa (vulgate) 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.
- 109 For these aims (i.e., healing and enlarging the ear), the text known to Dalhaṇa (vulgate) 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.
- 110 Dalhaṇa's version of 1.16.23 (**vulgate**) added another hemistich that stated more explicitly that the scarification should not be done on the outside of hole as it will cause derangement.
- 111 After verse 17, the 1938 edition of Ācārya (**vulgate**) 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 Palhaṇa (**vulgate**) 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 with a dis-

- 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.¹¹²
- 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.
- Next, having cut a slice of flesh (vadhra),¹¹³ with the same measurements, off the cheek, the end of the nose is then scarified.¹¹⁴ Then the undistracted physician, should quickly put it back together so that it is well joined.
- Having carefully observed that it has been sewn up properly, he should then fasten it along with two tubes. Having caused it to be raised, the powder of sappanwood, it liquorice and Indian barberry should be sprinkled on it. 118
- 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.¹¹⁹
- 23 And once healed and really come together, what is left of that slice of flesh
 - cussion of the disease परिपोट. Dalhana went on to say that some believe that these verses were not composed by sages and, therefore, do not read them.
- 112 The order of verses 17 and 18 is reversed in Dalhana's version (vulgate).
- 113 The version of 1.16.28b known to Dalhana (**vulgate**) reads "bound, connected (*baddham*)" 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**).
- 114 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, Dalhaṇa (vulgate) 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.
- 115 Dalhaṇa 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 (vulgate)). They should not be made of lead or betel nut because the weight will cause them to slip down.
- 116 The Sanskrit term उन्नामियत्वा in 1.16.21 is non-Pāṇinian.
- 117 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 (vulgate)). The text known to Dalhaṇa has पतङ्ग (1.16.29 (vulgate)) and this term is propagated in modern dictionaries.
- 118 Dalhaṇa glossed अञ्चन as रसाञ्चन, elixir salve (vulgate).
- 119 The expression स्वयथोपदेश is ungrammatical but supported in all available witnesses.

(vadhra) should then be trimmed.¹²⁰ If it is reduced, however, one should make an effort to stretch it, and one should make its overgrown flesh smooth.¹²¹

¹²⁰ The vulgate transmission has lost the word वध्र and replaced it with अर्ध "half," which makes little sense in this surgical context.

¹²¹ Dalhaṇa accepted a verse following this, 1.16.32 (vulgate), 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 Jejjaṭa, 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. 122

gosw-2011 studied the commentaries of Dalhaṇa 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 *Carakasaṇhitā* in their commentaries on this topic.¹²³

Translation

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.¹²⁴



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. 125

Translation

- 1 And now we shall explain the chapter about diagnosis of diseases caused by wind. 126
- 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!¹²⁷ Divodāsa¹²⁸ 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

¹²⁵ HIML: IA, 234. (rube-1954b) studied the wind doctrines in the Carakasaṃhitā.

¹²⁶ Present chapter discribes the diseases caused by vitiated wind and its mixing with other humours. In the medical term it is known as rheumatism.

¹²⁷ H and N both mss read भूपते instead of कौपनैः in the vulgate.

¹²⁸ 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 tangibility¹²⁹. Having all chief qualities which are sattva, rajas and tamas but predominated by rajas. It has inconceivable power. It is inducer of humours¹³⁰ and distinguished in the group of diseases¹³¹. *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. 132
 - 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 133 .

¹²⁹ According to Dalhaṇa, 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, शरीराद्बहिस्तु संचरतो धरणीधारणादिः Su 1938:257)

¹³⁰ Palhaṇa suggests नेता=प्रेरक (Su 1938:257)

¹³¹ Dalhana suggests राट्=राजते not राजा

¹³² According to Dalhaṇa, सम्पत्तिः=सम्पन्नता at 1.6.3 (Su1938:23). Dalhaṇa commented that Gayadāsa reads `इन्द्रियार्थोपसंप्राप्तिंऽ but not written here because of being detailed. (ग-यदासाचार्यस्तु इमं श्लोकं `इन्द्रियार्थोपसंप्राप्तिऽ इत्यादि कृत्वा पठित, स च विस्तरभयान्न लिखितः) But H and N MSS suggest 'इन्द्रियार्थोपसम्पत्तिः'

¹³³ Dalhaṇa suggests स्थान=साम्य, यापयन्ति=धारयन्ति (The manuscripts all read प्राणोदानः स-मानश्च व्यानोपानस्तथैव च . against the vulgate's प्राणोदानौ समानश्च व्यानश्चापान एव च . I think प्राणोदानौ, व्यानापानौ or व्यानश्चापान एव च should be read)

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 fluid¹³⁴. Unvitiated Vital wind mostly causes hiccups, asthma etc. diseases.

- 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 ears¹³⁵.
- 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.

¹³⁴ Dalhaṇa suggests head, chest, throat and nose as locations of prāṇa. (Sus1938:259) Gayadāsa suggests अग्नि for प्राण.

¹³⁵ Dalhaṇa suggests it also causes diseases like cough etc. (चकारादन्यादिप प्राणोदानौ, व्या-नापानौ कासादीन करोति .)

- Residing in the skin, ¹³⁶ 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. ¹³⁷

 Residing in the artery it causes acute pain, contraction and filling up of the artery. ¹³⁸ It stuns, vibrates and destroys ¹³⁹ 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. ¹⁴⁰
- 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.
- 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.

¹³⁶ Dalhaṇa and Gayadāsa both suggest त्वक्=रस. Gayadāsa explained that chyle stays in the skin and therefore, in the verse त्वक्थ should be read as रसस्थ as we read secondary meaning in the sentences like गङ्गायां घोषः.

¹³⁷ The MS H does not read व्रणांश्च रक्तगो ग्रन्थीन् सशूलान् मांससंश्रितः . against the vulgate. (vulgate).

¹³⁸ According to Dalhaṇa सिराकुञ्चनं is also known as कुटिला सिरा (vulgate)

¹³⁹ Dalhaṇa and Gayadāsa both suggest the meaning of हन्ति for being not capable of both stretching and contraction. सन्धिगतः संधीन् हन्ति प्रसारणाकुञ्चनयोरसामर्थ्यं करोति (vulgate)

¹⁴⁰ Palhaṇa 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, uddaņḍaka? and pain in the swelling.

- 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.??
 - 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.
- 81–44 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 Gout¹⁴¹.
- 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 ¹⁴² 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.
 - 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 ($\bar{a}k\bar{s}epa$) it is called convulsions ($\bar{a}k\bar{s}epaka$).
- 52–56 Because in this situation a person often sees darkness and fall, it calls spasmodic contraction (apatānaka) 143. If wind mixed with phlegm stays excessively in the arteries, it stiffs 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.

¹⁴¹ In the medical term वातरक्त is known as Gout. Cakrapāṇi called it आढ्यरोगः Carakas-aṃhitā sū.14.18 and ci.28.66

¹⁴² Gayadāsa suggests सर्वे दुष्टाः शोणितं चापि nominative plural instead of locative singular.

¹⁴³ 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, ancle, 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.

- Aggravated phlegm and bile mixed with wind or only vitiated wind causes fourth convulsive disease due to trauma.
- Convulsions due to miscarriage, excessive bleeding, and injury are incurable 144.
- 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). ¹⁴⁵ 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. 146.
 - A paralysis (*pakṣāghāta*) caused by wind ¹⁴⁷ 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.
- 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. Dalhaṇa 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 Dalhaṇa commented that the आक्षेपक and अपतानक is same (Su 1938:266) and again

¹⁴⁴ According to Dalhaṇa convulsion (ākṣepākā) is also known as अपतानक (Su 1938:266). He further mentions that even if fortunately, it is cured, it cripples the limb.

¹⁴⁵ 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.

¹⁴⁶ 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.

¹⁴⁷ Here the term যুद्धवात 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. Gayadāsa 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 Dalhaṇa, 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 jawbones (*ardita*) disease. In that case, half of the face and neck become curved, head trembles, speech hindrances, deformity occurs in the eys, eyebrows and cheeks.¹⁴⁸ Experts in diseases call this disease spasm of the jaw-bones (*ardita*).
 - 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.
 - Arteries of Heel and toes stricken by vitiated wind prevents stretching of thighs. This disease is known as sciatica ($grdhras\bar{i}$).
 - 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*).

 149
 - 76 Vitiated wind and blood in the joint of knee causes synovitis of knee join (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.

¹⁴⁸ Dalhaṇa suggests नेत्रादीनाम् इत्यादि शब्दात् भूगण्डादि उपसङ्ग्रहः

¹⁴⁹ 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 (*pādadāha*).
- 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. 150
- 83 Vitiated wind singly or mixed with phlegm cover the channel of ears causes deafness.
- Vitiated wind saturated with phlegm covering the arteries which conduct the sound of speech makes a person inactive (akriya), dumb ($m\bar{u}ka$). He mumbles (mimmira) through the nose and stammers (gadgad). ¹⁵¹
- 85 Vitiated wind penetrating into the cheekbones, temporal bones, head and neck causes piercing pain in the ears. It is called ear-ache (karnaśula). 152
- 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.
- 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 সন্থাध्मान. It rises in the stomach anda causes pain in the heart and sides.
- 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 वाताष्ठीला. A tumour of similar shape rose obliquely in the abdomen obstructing the passage of wind, faeces and urine should be known as प्रत्यष्ठीला.

¹⁵⁰ Palhaṇa and Gayadāsa both have defined two diseases i.e., अंसशोष and अवबाहुक respectively.

¹⁵¹ 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.

¹⁵² In the medical terms, this disease is known as Otitis.

¹⁵³ There's an addition in MS N. नाभेरधस्तात् संजातः संचारी यदि वाऽचलः



Śārīrasthāna 2: On Semen and Menstrual Fluid

Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.¹⁵⁴ Das (2003: chs 6–8) also studied topics of this chapter.

Conceptual background

Das (2003: ch. 13) provides an overview of the conceptual background of ayurveda on the topics discussed in this adhyāya. In brief ...

Translation

- 1 We shall now explain the purification of sperm (*śukra*) and women's fertile blood (*śonita*).
- 3 Semen (*retas*)¹⁵⁵ is incompetent for producing offspring if it is [characterized by] wind, bile, phlegm, blood (*śonita*),¹⁵⁶ decomposition

¹⁵⁴ HIML: IA, 244–246.

¹⁵⁵ The Sanskrit expresses "semen" in the plural.

¹⁵⁶ Note that the list begins with the four entities, wind, bile, phlegm and blood, perhaps hinting at a four-humour system (see Wujastyk 2000: 485–486).

(kuṇ apa), lumps (granthi), 157 stinking pus $(p\bar{u}tip\bar{u}ya)$, low volume $(k\bar{s}\bar{i}na)$, urine, or feces.

¹⁵⁷ Contemporary medicine understands that normal ejaculate contains coagula which, however, dissolve after about half an hour. But coagula that do not dissolve may be a sign of an underlying disorder.



Cikitsāsthāna 4: On the Treatment of Wind Diseases

Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.¹⁵⁸

Translation

1 Now we shall describe the treatment of wind diseases.

2

- 3 When the wind enters the stomach and one vomits as a result, one should sequentially administer the six-bearing (মন্ত্র্বেण) remedy with cool water for seven nights. 159
- 4 The remedy constituting of leadwort, ??, velvet-leaf, ??, Himalayan monkshood, and myrobalan cures serious diseases and is called the six-bearing (ষদ্ধব্য).
- 5 When the wind has entered the abdomen (पक्षाशय), one should treat it with evacuation of the bowels (विरेचन) using an unctuous substance. One should also treat it with cleansing enemas and excessively salty foods. 160

158 HIML: IA, 265-266.

- 159 The vulgate has the reading छर्दियत्वा which means "after making [him] vomit". Thus, vomiting is a part of the treatment. Whereas in the H manuscript, vomiting is the symptom of the ailment that needs to be cured.
- 160 In H, the reading সামা: should be read as সামা: for it to mean "foods". Otherwise, সামা: means "throwing/discharging" or "darts/spears".

This is a change we should make in the edition.

You need not give all the grammatical details about śrotādi. Assume you are talking to knowledgeable Sanskrit scholars.

- 6 Once the wind has entered the lower belly, a cleansing enema is recommended. And, on the wind having entered the ears, etc., the windslayer sequence should be executed.¹⁶¹
- 7 On the wind having entered the skin, flesh, and blood, one should rub oil on the body (अभ्यङ्ग), apply a poultice on the body (उपनाह), massage the body (मर्दन), smear ointments on the body (आलेपन), and do bloodletting (असृग्विमोक्षण).
- 8 On the wind having entered the ligaments, joints, and bones, the wise [physician] should employ the application of an unctuous poultice (से-होपनाह), cauterization (अग्निकर्म), binding (बन्धन), and massage.
- 9 On the wind being concealed within the bones, it (wind) should be beaten by churning those body parts with hands. A strong physician should then insert a narrow tube within the bone and suck out the wind completely from the bone.¹⁶²
- On the wind having entered the semen, one should perform the treatment for the defects of the semen. 163
- The intelligent physician should conquer the wind situated within the whole body by immersion, *kuṭī*, *karṣa*, *prastara*, oil massage, enema, and blood-letting. Or, in case of wind situated in one part of the body and

¹⁶¹ In the H manuscript reading "श्रोतादि...," there appears to be a double sandhi. See Nidānasthāna Ch. 1 verse 12 for another example of double sandhi. Furthermore, the syllable in H after "चानिल" is not clear. It could be "ह्य" or "हा" or perhaps something else. The reading in the vulgate for this syllable is "हा". Thus, the complete word becomes "अनिलहा" which means "the slayer of wind". This makes proper sense in this verse. We have considered this reading ("अनिलहा") for our translation.

¹⁶² The H manuscript has the reading अस्थीन which is the accusative plural form of अस्थि. The accusative case does not make sense here. The vulgate has the reading अस्थिन, the locative singular form of अस्थि. This reading makes proper sense in the verse. Therefore, we have accepted the vulgate reading अस्थिन for translating this verse.

¹⁶³ Dalhaṇa comments (**vulgate**) that this treatment for the defects of the semen is mentioned [earlier] as the যুক্তমাणিतযুদ্ধি, the purification of the semen and the blood. This is the Śārīrasthāna Ch. 2, যুক্তমাणিतविशुद्धि. The second hemistich of this verse is not a part of this sentence but is a part of the sentence in the next verse. That is because the remedies described in this hemistich are appropriate for the disease described in the first hemistich of the next verse.

¹⁶⁴ In H, the last syllable नि of the compound word does not make sense. The vulgate has the compound word ending with भिः which makes proper sense. For making a meaningful translation, we have accepted the vulgate reading here. Furthermore, Dalhaṇa describes the treatments kuṭī, karṣū, and prastara in his commentary in (vulgate). Regarding blood-letting, he comments there that because the verse has the plural form

contained within it, the intelligent physician should cure it with horns.

- 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.
- [On the wind being inactive], one should also lick the milk of the *pan-camūlī* accompanied with salt and ??¹65 mixed with oil, and one should indeed consume meat soup made sour with fruit.¹66
- 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.¹⁶⁷ with a wind-removing remedy combined with all sour substances and with the meat from a water body along with lots of unction, lukewarm¹⁶⁸ and salty, is well known as *Sālvala*.
- 16ab For patients with diseases of the wind, one should always apply this $(s\bar{a}lvala)$ as a poultice.
- 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 *śālvala* poultice on it, one should insert it into a sack made of the hide of a cat, mongoose, *udra* or deer.
 - 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.¹⁷¹

सिरामोक्षेः, five blood vessels have to be drained of blood if the wind is not pacified by oil massage, etc.

¹⁶⁵ Āgāradhūma seems to be a plant as seen in Monier Williams' Sanskrit dictionary.

¹⁶⁶ The vulgate reading दिह्यात् (should apply) totally changes the meaning.

¹⁶⁷ For grammatical accuracy, there needs to be a visarga at the end of the word काकोल्यादि.

¹⁶⁸ Perhaps सुखोष्णम् is an indeclinable. But, it could also be a grammatical inaccuracy where it should have a *visarga* at the end: सुखोष्णः.

¹⁶⁹ This seems to be the correct spelling as against the unclarity in the earlier verses.

¹⁷⁰ some aquatic animal

¹⁷¹ 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).

- Oils, perspiration, oil massage, enema, unctuous purging of the bowels, *śirobasti*, oiling the head, unctuous smoke, gargling with lukewarm water, *nasya*, unctuous paste, milks, meats¹⁷², soups, oils¹⁷³, 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.
 - One should take *akṣa* quantities of unguent pastes¹7⁴ of turpeth,¹7⁵ ??, ??, ??, ??, and embelia, a Bengal quince fruit equivalent measure of ??-root and ??, two *pātra* quantities of both *triphalā*-decoction¹7⁶ and yogurt, and one *pātra* measure of ghee.¹7७ 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.¹7⁶ This procedure of making ??-ghee should also be referred for making ??-ghee and ??-ghee.¹79
 - 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

¹⁷² The plural indicates milk and meat from various animals.

¹⁷³ This is the second occurrence of the word सेहाः in this sentence. This seems to be an anomaly.

¹⁷⁴ কলে also means an unguent paste. Refer to Apte's dictionary.

¹⁷⁵ In H, perhaps it should have been त्रिवृद् instead of तृवृत्.

¹⁷⁶ त्रिफलारस is here taken to mean a decoction of triphalā.

¹⁷⁷ The exact measurements of *akṣa* and *pātra* are given in Dalhaṇa's commentary in **vulgate**.

¹⁷⁸ It should be understood here that the unctuous substance to be used for purging the bowels is the ??-ghee.

¹⁷⁹ अशोक and रम्यक are the Ashoka and Chinaberry respectively.

cooked.¹⁸⁰ This is the *anutaila* (अनुतैल)¹⁸¹ that is mentioned in wind disorders. It is called *anutaila* because it is produced from tiny oily objects.¹⁸²

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 oily¹⁸³ in a big vessel and totally cover it with water. 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 possible¹⁸⁵ with one thousand parts of each of the following—a decoction of wind-alleviating herbs, meat soup, milk, and *kāñjika*¹⁸⁶—and thus prepare the *sahasra-pāka* (that which is cooked with thousands). The admixture added to the oil contains the *hemavata* herbs¹⁸⁷, 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. Thereafter, the perfectly cooked oil should be poured into a golden or silver pot and stored. This $sahasra-p\bar{a}ka$ is the oil possessing undiminishing potency and is fit for

¹⁸⁰ In H, the word दन्तप्रतीवायं in the compound word वातप्रौषधदन्तप्रतीवायं 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.

¹⁸¹ The न् should be read ण्.

¹⁸² The word अनु in the compound word अनुतैलद्रव्येभ्यः should be read अणु.

¹⁸³ In H, the word यावन् should have been यावान्.

¹⁸⁴ The reading in H, कटाहेभ्यः सिंचेत्, does not make sense here. Thus, we have accepted the vulgate reading कटाहे ऽभ्यासिंचेत् for the translation.

¹⁸⁵ The phrase "यावता कालेन शक्नुयात् पक्तम्" 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.

¹⁸⁶ Dalhaṇa comments (**vulgate**) that the word अम्ल here means কাञ्जिक which is the water drained after boiling rice and is a little fermented. Refer Monier Willams's Sanskrit Dictionary.

¹⁸⁷ The word should be हैमवताः as in the vulgate. It means "the herbs of the snowy mountains". Dalhaṇa comments (**vulgate**) that हैमवताः refers to the herbs that grow in the northern region.

¹⁸⁸ These activities are a symbolic way of showing reverence.

kings.

- Thus, that which is cooked with a thousand parts is called *sahasra-pāka*. One should collect fresh leaves of castor oil tree, ??, ??, weaver's beam tree, Indian beech, ??, and leadwort. These leaves should be completely pounded along with salt in a mortar. This mixture should be put in a pot filled with oil 190. It (pot) should be smeared 191 with cowdung. Thereafter, the pot should be heated. This (resultant) is the *patra-lavaṇa* (leaf-salt) that is mentioned in wind disorders.
- In the same way, one should pound the stalks of ?? and eggplants smeared with salt and fill a pot with it.¹⁹³ In that pot, one should add ghee, oil, fat, and marrow. Then, one should smear it¹⁹⁴ and heat it as earlier. This (resultant) is the *sneha-lavaṇa* (fat-salt) that is mentioned in wind disorders.
- One should collect the fresh fruits, roots, leaves, and branches of all the twenty [herbs]: ??, ??, Tellicherry bark, Bengal quince, purple calotropis, ??, ??, ??, ??, ??, ??, ??, ??, Indian beech, ??, poison berry, ??, marking-nut tree, ??, ??. One should then mix them with salt and heat them as earlier. 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 *plīhāgnisaṇga*, indigestion, loss of appetite, and piles.

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

Euphorbia Antiquorum (Antique spurge)

¹⁸⁹ In H, the ending नाम should be णाम due to sandhi.

¹⁹⁰ स्नेहघट can also mean a pot filled with ghee

¹⁹¹ The H or vulgate do not specify with words that it is the pot to be smeared. But, it is to be understood.

¹⁹² The word दाहयेत् usually refers to burning, but sometimes it can refer to heating.

¹⁹³ In H, there should be a visarga after लवणा.

¹⁹⁴ As earlier, the pot should be smeared with cow-dung.

¹⁹⁵ 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. 196

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). 197 However, this is not correct. 198 Why? Just as leprosy, after spreading over a surface it (afflicted blood) becomes deeply situated. Therefore, its being of two different types is refuted.
- When the wind is aggravated by fighting a strong person, etc. 199, 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.

¹⁹⁶ HIML: IA, 266.

¹⁹⁷ Dalhaṇa comments (**vulgate**) that उत्तान refers to being situated in the skin and flesh, and अवगाढ refers to being situated internally.

¹⁹⁸ In H, the word तन् should be तत्.

¹⁹⁹ 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.²⁰⁰ Later, it spreads throughout the body. Its early forms are pricking pain, burning, itching, ulcer, trembling²⁰¹, roughness of the skin, pulsation in the blood vessels, tendons, and tubular vessels²⁰², 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.
- 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.²⁰³ 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 uraria²⁰⁴, 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, ??, ??, hare foot uraria²⁰⁵, ??, wild asparagus, ??, and ??. This milk should then be used to cook oil with the admixture of pastes of ??, ??, ??, ??, deodar,

²⁰⁰ In H, the word तन् should be तत्.

²⁰¹ In H, there should not have been the स् after स्तम्भ.

²⁰² In addition to blood vessels, it would also include the nerves.

²⁰³ In H, the reading अम्लान does not make sense given the context. Therefore, we have accepted the vulgate reading ম্লান for the translation.

²⁰⁴ Dalhaṇa glosses (**vulgate**) śrgālavinnā as pṛśniparṇī.

²⁰⁵ According to Dalhana, śrgālavinnā is prśniparnī.

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-flower²⁰⁶, ??, liquorice, giant potato, heart-leaf sida, country mallow, and ??²⁰⁷, with the admixture of cottony jujube, etc. Or, one should use the heart-leaf sida-oil that is cooked as *śatapāka*.²⁰⁸ 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.²⁰⁹ 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*²¹⁰ 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 roscoea, ??, ??, heart-leaf sida, country mallow, hare foot uraria²¹¹, ??, ??, sugar, bulrush²¹², ??, and sweet flag. Or, the essence of unctuous fruits²¹³ can be used as a poultice. Or, a veśavāra²¹⁴ prepared from the flesh of a fat ci*licima* fish²¹⁵ can be used instead. Or, [one can use] the poultice contain-

206 Dalhaṇa glosses (**vulgate**) mayūraka as apāmārga.

- 211 śrgālavinnā
- 212 For kaśerukā
- 213 Dalhana comments (vulgate) that the unctuous fruits mentioned here are sesame, castor, flax, ??, etc.
- castor, nax, ??, etc.
 214 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.
- 215 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 this verse belongs to the Nitiratua. I could not find this text.

²⁰⁷ Dalhana comments (**vulgate**) that sacred grass, ??, ??, ??, and ?? are called *tṛna* (grass).

²⁰⁸ 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.

²⁰⁹ Dalhaṇa comments (**vulgate**) that the sour things (*amla*) are ??, ??, ??-water, etc. *Surā* is some kind of liquor, *sauvīraka* is perhaps the fruit of the jujube tree, and *tuṣa* is perhaps Terminalia Bellerica (विभीतक).

²¹⁰ In the $Su\acute{s}rutasamhit\bar{a}$, the word for milk is $k\bar{s}\bar{i}ra$ or payas but not dugdha. Therefore, the word dugdha here can mean the sap of plants or something that is extracted.

- ing Bengal quince-rind²¹⁶, crape jasmine, deodar, ??, ??, peas, costus, ??, liquor, yogurt, and whey. Or, [one can use] the ointment prepared by mixing citron, *amla*²¹⁷, salt, and ghee with honey and horseradish treeroot. Or else, [one can use] the unctuous sesame paste.
- 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].²¹⁸

[The patient] should be sprinkled with a decoction of ??, lotus stalk, ??, and ?? mixed with goat-milk²¹⁹, 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*²²⁰ 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 ??, ??, ??²²²¹, ??, ?!, turmeric, horned pondweed, sacred lotus, etc. The poultice should be mixed with ghee.

- 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

fat fish that is a ਜਲ (cilicima)".

Dalhaṇa says in his comment (**vulgate**) 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 गर्वं याति रोहितः | अङ्गुष्ठोदकमात्रेण शफरी फर्फरायते || This indicates that *rohita* is a deep water fish.

²¹⁶ The word पेसिका in H should be read पेशिका.

²¹⁷ Perhaps it could mean vinegar or sour curds. Refer to Monier Williams Sanskrit Dictionary.

²¹⁸ Dalhana comments (**vulgate**) that the sweet remedies are cottony jujube, etc., bitter remedies are pointed gourd, etc., and astringent remedies are *triphalā*, etc.

²¹⁹ The compound word ending with कषायेण is taken to be a bahuvrīhi for अजाक्षीरेण (goatmilk).

²²⁰ *Jīvanīya* seems to be a group of medicinal herbs. There is an Ayurvedic preparation called *jīvanīya-ghṛta*. Refer to the *Āyurvedīya Śabdakośa* vol. 1.

²²¹ तालीस should be read तालीश

phlegm, the patient should be made to consume a decoction of emblic and turmeric that is sweetened with honey, or a decoction of $triphal\bar{a}$, 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 acidic²²². 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, ??²²³, liquorice, ??²²⁴, and ??.

The poultice should be made of either the paste of white mustard, or the paste of sesame and Withania, or the paste of ??²²⁵, selu plum, and wood apple, or the paste of honey, horseradish tree, and hogweed,²²⁶ or the paste of dry ginger, long pepper, black pepper,²²⁷ ??, and poison berry.²²⁸ These five poultices are prepared with salty water. Thus, they have been described.

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.²²⁹

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].²³⁰ In this way, one should [reduce] all the long peppers. This is called *Pippalīvarddhamānakam* (Increasing Long Peppers). It indeed cures wind-blood, intense fever,²³¹

The provisional edition should be modified accordingly.

²²³ Monier Williams states Rumex Vesicarius for śuktā

²²⁴ DCS has this entry: Cryptolepsis buchananii Roem. et Schult. (Surapāla (1988), 453) Decalepis hamiltonii Wight et Arn. (Surapāla (1988), 453)

²²⁵ According to V. S. Apte, दारु can mean देवदारु.

²²⁶ H has a short अ at the end instead of the long आ.

²²⁷ व्योषतिक्ता refers to the group of these three pungent spices. Also see Sūtrasthāna 14.35.

²²⁸ 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.

²²⁹ It means that the respective methods of treating the aggravation of individual humours should be combined.

²³⁰ In H, the letter ञ্ in भूयञ्च should have been য্.

²³¹ Perhaps विषमज्वर could mean irregular fever.

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,²³² ??, ??, 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 ?? and sweetened with sugar and honey is for drinking. Old ghee that is cooked with <code>jīvanīya</code> or that is cooked with a decoction of ?? is for sprinkling. Cooked heart-leaf sida oil is for sprinkling, bathing, enema, and eating²³³. 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.²³⁴

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

- Poultice, sprinkling [oil], plaster, oil massage,²³⁵ spacious and comfortable rooms²³⁶ with no wind, soft pillows, comfortable beds, and soft massages are recommended in the condition of wind-blood.
 - Exercise, mating, anger, eating hot, sour, or salty foods, sleeping during the day, and food that is slimy or heavy should be avoided.
 - One should treat the person who is affected with spasmodic contraction,²³⁷ who does not have droopy eyes and crooked eyebrows, whose

²³² H has कशेरुका.

²³³ Perhaps it means that one should eat foods cooked in that oil.

²³⁴ The word भवति in H should have been भवन्ति.

²³⁵ In H, the part व्यजनानिलाः 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.

²³⁶ In H, read the स सरणानि as श.

²³⁷ In H, the reading अपताकिनम् should have been अपतानकिनम्.

fingers have not become rigid, who is not perspiring or trembling, who is not in a state of delirium, who is not bed-ridden,²³⁸ and who is not restrained externally. There at the beginning itself,²³⁹ after rubbing the patient with oil and making him perspire, one should treat him with a strong <code>avapīḍa²⁴⁰</code> 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 ??, 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*²⁴¹ 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.²⁴² Or else he should be made to sweat by [a mixture of] ??, *veśavāra*,²⁴³ and milk.

Oil cooked with the juice of radish, ??, ??, and ?? should be used in sprinking, etc. for patients with spasmodic contractions. ²⁴⁴ Sour yogurt mixed with black pepper and drunk on an empty stomach alleviates spasmodic contractions. Or else, ghee, oil, body fat, or bone marrow

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

²³⁸ V. S. Apte has खद्मयति. The Āyurvedīya Śabdakośa has the entry खद्मापातिन् 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.

²³⁹ In H, प्रागैव should have been प्रागेव.

²⁴⁰ 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.

²⁴¹ It refers to an admixture of substances to medicines either during or after decoction. Refer to Monier-Williams's Sanskrit dictionary.

²⁴² H has the reading रथाकारचुल्ल्याम् that means "fireplace shaped like a chariot", but the vulgate reading रथकारचुल्ल्याम् makes more sense here. Thus, we have accepted it.

²⁴³ Refer the above text no.7 for *veśavāra*. In H, the syllable ਕੈ should have been ਕੇ.

²⁴⁴ The word तैलम् is not present in H but is present in the vulgate. We have accepted it.

[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.²⁴⁵ Milk prepared with wind-alleviating medicines. Gruel prepared with barley, ??, ??, 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.

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,²⁴⁶ 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.²⁴⁷ Anutaila should be used for massage.²⁴⁸ Sālvala should be used for poultice.²⁴⁹ 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

One should treat the patient with $ardita^{250}$ who is strong and possesses 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 ($pa\tilde{n}cam\bar{u}l\bar{l}$) with grass and prepare its

Search for the section where the treatment of $\bar{a}k$, epaka is described.

Make the first letter of sentence capital.

²⁴⁵ 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.

²⁴⁶ According to P. V. Sharma, this refers to mild evacuatives (purgatives).

²⁴⁷ Refer Nidānasthāna 1.50-51 for ākṣepaka.

²⁴⁸ For the procedure of preparing anutaila, refer Cikitsāsthāna 4.28.

²⁴⁹ For the procedure of preparing sālvala, refer Cikitsāsthāna 4.14-15.

²⁵⁰ Refer Nidānasthāna 1.71-72 for ardita.

decoction in milk mixed with twice the water. Then, the decoction with the milk remaining²⁵¹ should be brought down [the stove] and filtered. It should then be mixed with a $prastha^{252}$ 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 $k\bar{s}\bar{i}rataila$ that should be used in drinks, etc. for patients with ardita.

- In the diseases of <code>gṛdhrasī</code>, <code>viścañcī</code>, <code>kroṣṭukaśīrṣa</code>, <code>paṅgukalāya</code>, lameness, <code>vātakaṇṭaka</code>, burning sensation in the foot, numbness of the foot, <code>avabāhuka</code>, deafness, and <code>dhamanīvāta</code>, one should pierce the blood vessel as described earlier and, barring the case of <code>avabāhuka</code>, one should look up the treatment for wind diseases.
- However, in the case of *karṇamūla*,²⁵³ lukewarm juice of ??²⁵⁴ mixed with liquorice, oil, and salt should be put into the ears.²⁵⁵ Or else one can use goat urine, liquorice, and oil. Or else one can use oil that is cooked with citron, ??, ?? juice, and urine.²⁵⁶ 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.
- 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 the patient drink ghee that is made thick with asafoetida and ??.²⁵⁷ One should also treat the patient with enemas.

²⁵¹ It means that the water has evaporated.

²⁵² Dalhana comments (**vulgate**) that a *prastha* is a measure of weight that is equal to 32 *nala-s*.

²⁵³ The vulgate has the reading कर्णशूले which appears to be a more credible reading according to the context.

²⁵⁴ शुझवेर appears to be a name of ginger. Refer to the Sanskrit dictionary of Monier Williams.

²⁵⁵ In H, the reading रसैः does not seem to make sense here. Hence we have accepted the vulgate reading रसम्.

²⁵⁶ In H, the word ਜੈਲ should have been ਜੈਲਸ਼ to make proper sense. The vulgate has this reading. Thus we have accepted it.

²⁵⁷ यवश्वार is an alkali prepared from the ashes of burnt green barleycorns. Refer to the Sanskrit dictionary of Monier Williams.

- In the case of *ādhmāna*,²⁵⁸ however, one should do *avatarpaṇa*,²⁵⁹ heating the hands, *phalavartikriyā*,²⁶⁰ stimulation of digestion, and [administer] digestives. One should also employ the purging of bowels and enemas. In the case of *pratyādhmāna*,²⁶¹ one should employ vomiting, fasting, and stimulation of digestion.
- In the case of $aṣṭh\bar{\imath}l\bar{a}$ and $pratyaṣṭh\bar{\imath}l\bar{a}$, the procedure is that of gulma and internal abscess.
- The beneficial asafoetida, the three pungent spices (long pepper, black pepper, and dry ginger), sweet flag, ?? grains, ??, ??, 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, pārśvodara, 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 humours²⁶³ and should be cured accordingly.

The wind that is accompanied by fat causes a swelling that is painful, hard, and cold. The physician should properly treat it like a

²⁵⁸ Refer to *Nidānasthāna* 1.88. V. S. Apte explains it as "swelling of the belly". P.V. Sharma has translated it as flatulence.

²⁵⁹ We are unclear about its meaning. The vulgate has the reading अपतर्पण that means fasting.

²⁶⁰ 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.

²⁶¹ Refer to *Nidānasthāna* 1.89. According to the Sanskrit dictionary of Monier Williams, it is a kind of tympanites or wind-dropsy.

²⁶² Refer to Nidānasthāna 1.90 and 1.91.

²⁶³ In H, the reading लक्षणोन्याम्थ does not make sense. Hence I cannot translate it. Perhaps the correct reading could be लक्षणाभ्याञ्च. This would connect with the two conditions of the wind as stated in the verse.

- treating a swelling.
- 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.
- Also, the thighs become pained, stiff, cold, and do not quiver due to sleep. They become heavy and as if belonging to someone else.²⁶⁴
- That is called ūrūstambha. Others call it āḍhyavāta. In that case, one should drink the ṣandharaṇa powder with cool water.
- 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 ??.
- 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.²⁶⁵

One should eat old ??s, ??, etc. along with uncooked²⁶⁶ flesh of wild animals and unsalted vegetables that are beneficial.

When the phlegm and fat become amply reduced one should again employ the treatment of oil massage, etc. for the patient.

²⁶⁴ 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.

²⁶⁵ The word दिहेत् in H is not a proper Sanskrit word. We have taken its proper form दिह्यात् as given in the vulgate.

²⁶⁶ 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 $2002.^{267}$ Das made observations about the afterbirth ($apar\bar{a}$) that is mentioned in 4.15.17 (**vulgate**). ²⁶⁸ **selb-2005** has explored gyencological narratives in ayurveda. ²⁶⁹

Translation

- 1 And now we shall explain the difficult delivery medically treated.
- 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.

²⁶⁸ Das 2003: 517.

²⁶⁹ 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.
- 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 *śālmalī* - 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 (तियेक्चीनस्य ?) 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.
- But, the live fetus should not be torn apart in any case. As, the live fetus may kill the mother and self soon.
- 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(अङ्गलिशस्त्र); 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.
- For, irritated wind causes different movements of the fetus. In this situation, the wise physician should act intelligently.
- 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 1: Protecting the King from Poison

Introduction

The first chapter of the Kalpasthāna of the *Suśrutasaṃhitā* 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.²⁷⁰

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.²⁷¹

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

exhibits characteristic signs when added to milk and other drinks.²⁷² 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.²⁷³ Translations of this chapter since Meulenbeld's listing have appeared by wuja-2003shar-1999srik-2002.²⁷⁴

Manuscript notes

MS Kathmandu NAK 5-333 has foliation letter numerals, for example on f. 323a, that are similar to MS Cambridge Add. 1693,²⁷⁵ dated to 1165 ce noted in Bendall's chart of Nepalese letter-numerals bend-budd

²⁷² Cf. *Arthaśāstra* 1.21.6 again.

²⁷³ HIML: IA, 289–290.

²⁷⁴ For a bibliography of translations to 2002, including Latin (1847), English (1877), Gujarati (1963) and Japanese (1971), see HIML: IB, 314–315.

275 Scan at cudl.lib.cam.ac.uk/view/MS-ADD-01693/1.

Translation

1–2 And now I shall explain the procedures for safeguarding food and drink, as were declared by the Venerable Dhanvantari.²⁷⁶

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.²⁷⁷

[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.²⁷⁸
 - 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.²⁷⁹
- 8–11 He should employ a doctor in his kitchen (*mahānasa*) who is respected
 - 276 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 (vulgate)). 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**.
 - 277 This is a quite different statement from the vulgate which has Dhanvantari as the teacher, and calls him the Lord of Kāśī (kāśipati) (vulgate). Dalhaṇa 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."
 - 278 Verses about the use of Venemous Virgins as a weapon do not appear in the Nepalese manuscripts. Cf. **wuja-2003**. This material is present in the commentary of Gayadāsa.
 - 279 The verb $\sqrt{\text{s}}$ svas 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,²⁸⁰ have clean utensils and be staffed by men and women who have been vetted.²⁸¹
- 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.²⁸²
- 18cd–19ab An expert knows people's body language (*ingita*) through abnormalities in voice, movement and facial expression. He should be able to identify a poisoner by the following signs.

Cf. Arthaśāstra 1.21.8.

- 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.²⁸³ A poisoner goes the wrong way and is absent-minded.
 - I shall explain the signs to look for in toothbrush twigs, in food and drink as well as in massage oil (abhyanga) and combs (avalekhana); in dry rubs (utsādana) and showers, in decoctions (kaṣāya) and massage ointment (anulepana); in garlands (sraj), 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.

²⁸⁰ 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**.

²⁸¹ Verses detailing the ideal staff are omitted in the Nepalese manuscripts. Cf. vulgatewuja-2003.

²⁸² The word सौपोदनैकपूपिक "chefs for the boiled rice soups and cakes" is grammatically interesting. The term सूपोदन (as opposed to सूपोदन) is attested in the *Bodhāyanīya-gṛhyasūtra* 2.10.54 (**shas-1920**). More pertinently, perhaps, सूपोदन is attested in the Bower Manuscript, part II, leaf 11r, line 3 (**hoer-bowe**).

²⁸³ The word ध्याम is glossed by Dalhaṇa (in a variant reading) as someone who is the colour of dirty clothes 5.1 (vulgate).

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.²⁸⁴ 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.²⁸⁵ The chital deer sheds tears and the monkey releases excrement.²⁸⁶
- Vapour rising from tainted food gives rise to a pain in the heart, it makes the eyes roll, and it gives one a headache.²⁸⁷
- 35, 36cd In such a case, an errhine and a collyrium that are costus, ??, spikenard and honey (*madhus*);²⁸⁸ a paste of sandalwood on the heart may also provide relief.²⁸⁹
 - 284 The verb अच्छेति "rises up" is a rare form best known from epic Sanskrit (ober-2003). The transmitted form क्रोञ्च is obviously a colloquial version of Sanskrit ক্रীञ्च. Commenting on 1.7.10 (vulgate), Dalhaṇa 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 कुरञ्ज and कोंचि. The form कोञ्च is found in Pāli (see cone-dict, who notes that Ardhamāgadhī has the same form). Elsewhere, Dalhaṇa calls the bird क्रौञ्चर, क्रौञ्च, and कैचर (1.46.105 (vulgate), 6.31.154 (vulgate) and (6.58.44 (vulgate) respectively).
 - 285 Dalhaṇa 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."
 - 286 MS Kathmandu KL 699 reads "bull (বৃषभ)" 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.
 - 287 "Tainted" translates उपक्षिप्त. The word's semantic field includes "to hurl, throw against," and especially "to insult verbally, insinuate, accuse." The commentator Dalhaṇa 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 Dalhaṇa's "given (दत्त)."
 - 288 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.
 - 289 **sing-1972** discussed the difficulties in identifying लामज्ज, a plant cited more often in the *Suśrutasaṃhitā* than in the *Carakasaṃhitā*; Dalhaṇa 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."

- 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-lilv.290
- If he eats that food, through inattention or by mistake, then his tongue will feel like a pebble $(asth\bar{\imath}l\bar{a})$ and it will lose its sense of taste. It stings and burns, and his saliva (ślesman) dribbles out.291 In such a case, he should apply the treatment recommended above for vapour (bāspa), and what will be stated below under "toothbrush twigs".292
 - 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.293
 - In this case, vomiting must quickly be induced using the fruits of emetic nut, gourd, red gourd, and luffa, taken with milk and watered buttermilk, or alternatively with rice-water.
 - Reaching the intestines (pakvāśaya), it causes a burning feeling, stupor,

he had a reading इन्द्रागोपा before him, and he tries to explain इन्द्रा and गोपा as separate plants. But he also says that some people read इन्द्रगोप.

- Dalhana 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 गुडुची, others for ब्राह्मी or चन्द्रतरु. Dalhana 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).
- 291 The word अष्ठीला is normally feminine. The Nepalese manuscripts read it with a short अ- ending. Gayadāsa noticed that some manuscripts read अष्ठील with a short -अ ending (MS Bikaner RORI 5157, f. 5v:7–8) and Dalhana reproduced his observation. The vulgate reading "from his mouth (चास्यात्)" is more obvious (lectio facilior), but is not attested in the Nepalese manuscripts.
- 292 Poisoned toothbrushes are discussed in verses 48 ff. below.
- 293 I translate मुर्च्छा in the light of the metaphors discussed by meul-2011, that include thickening and losing consciousness.

^{290 &}quot;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. Dalhana's remarks show that

diarrhoea, thirst, impairment of the senses, flatulence ($\bar{a}topa$) and it makes him pallid and thin.

- In such a case, purgation with the fruit of indigo $(n\bar{\imath}l\bar{\imath})$, together with ghee, is best. And 'slow-acting poison antidote $(d\bar{u}\bar{\imath}\bar{\imath}vi\bar{\imath}\bar{a}ri)$ ' should be drunk with honey and curds (dadhi).²⁹⁴
- When poison is in any liquid substances such as milk, wine or water, there are various streaks, and foam and bubbles form.
- And no reflections are visible or, however, if they can be seen once more, they are distorted, fractured, or tenuous and distorted too.²⁹⁵
- 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 $(pra\sqrt{kuth})$ and unripe ones ripen.²⁹⁶
- When a toothbrush twig has poison on it, the bristles are corroded and the flesh of the tongue, gums and lips swells up.²⁹⁷
- 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.²⁹⁸
- Alternatively, the rubbing (*pratisāraṇa*) can be done with either the roots of sage-leaved alangium, the bark of blackboard tree or siris seeds.²⁹⁹

294 The 'slow-acting poison' is discussed at 5.2.25 ff. (vulgate).

- 295 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.
- 296 The root $\sqrt{3}$ every "stink, putrify, rot" is apparently known only from its few uses in the $Su\acute{s}rutasamhit\ddot{a}$.
- 297 Gayadāsa and Dalhaṇa pointed out that "tooth socket (दन्तवेष्ट)" and "gum (दन्तमांस)" have the same meaning (2.16.14–26 (**vulgate**)).
- 298 This recipe is different from the vulgate.
- 299 The spelling of the name अङ्कोल varies अङ्कोट, अङ्कोल (gvdb); Dalhaṇa noted that the form अङ्कोल is a colloquialism (1.37.12 (vulgate)). The sentence is awkward and we have emended হািरीषमाषक to be a plural, as in the vulgate, rather than the ablative singular of the Nepalese witnesses. We follow Dalhaṇa in interpreting the compound to refer to the distinctive bean-like siris seeds, rather than to mung beans

I'm still unhappy about this

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

fn about sadyas+

- One should give advice about a poisoned tongue-scraper or mouthwash (*kavala*) in the same way as for a toothbrush twig.
- 51cd Massage oil that has been laced with poison is slimy, thick and discoloured.
 - When the massage oil has been contaminated with poison, boils arise, pain, a discharge $(sr\bar{a}va)$, inflammation of the skin, and sweating. And the flesh splits open.
- In such a case, sandalwood, crape jasmine, costus, and cuscus 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.³⁰¹
 - 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 (*abhy-aṅga*).³⁰²
- 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, ³⁰³ ghee, beautyberry,³⁰⁴ 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.³⁰⁵
 - 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 (}vulgate)).

³⁰⁰ The feminine स्फोटा for "boils" is unattested.

³⁰¹ 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.

³⁰² See verse 52 above.

³⁰³ Dalhaṇa comments here that 'bile is that fluid which goes along inside the tube attached to the liver' (कालखण्डलग्रनलिकामध्यगतजलं पित्तम्) 5.1.57 (vulgate).

³⁰⁴ See note 290.

³⁰⁵ The plant identifications in this passage follow <code>Dalhana's</code> glosses, although he noted a difference of opinion on the identity of woodrose (lit. "mouse-ear").

The expression धूमो वागारसंज्ञित: '...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 399, p. 121.

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

- 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 (*padminīkaṇṭaka*).³⁰⁶ In this case, the drink is honey and ghee, and the ointment (*pralepa*) is sandalwood with ghee, curds, honey, verbena, scarlet mallow and hogweed.³⁰⁷
- 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 (linga) 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.

śṛta

- 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 $(b\bar{a}spa)$ 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 (*pratipūraṇa*) 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.³⁰⁸
 - 69 When poison is mixed in with eye make-up (añjana), he gets tears and rheum (upadeha), with a burning feeling, pain, faulty vision (dṛṣtivibhrama), and possibly even blindness.³⁰⁹

explain more

- 306 See the description of this condition at 2.13.40 (**vulgate**), where the skin on the face is characterized as having pale circular patches that are itchy and have spots.
- 307 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.
- 308 The syntax of the Nepalese version is slightly unclear, but the vulgate has smoothed out the difficulties.
- 309 The term translated as "faulty vision" could also mean "rolling eyes." "Eye make-up"

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.
- Because of poisoned slippers there will definitely be a swelling, numbness $(sv\bar{a}pa)$, a discharge $(sr\bar{a}va)$ and an outbreak of spots (spho!a) on the feet. One should clean $(pra\sqrt{s\bar{a}dh})$ footstools together with slippers.
 - Ornaments lose their lustre, and they do not shine as they used to. They damage their respective locations with burning, sepsis $(p\bar{a}ka)$, and fissuring $(avad\bar{a}rana)$.³¹⁰
- One should apply the stated procedure for massage oil (*abhyaṅga*) 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.³¹¹
- 77–78ab He should prescribe it in drinks, liniments ($\bar{a}lepana$), errhines (nasya), and in eye ointment ($a\tilde{n}jana$). 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.³¹²
 - 79cd–80 He should always guard his heart when amongst people who are not

The two uses of prāpta are hard to translate. prāptāh → kṣipram 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 optatis normally made of Indian barberry.

³¹⁰ The reading अवदारुण in MS Kathmandu KL 699 is not attested elsewhere in Sanskrit literature. On "sepsis" for पाक, see wuja-2003.

³¹¹ This antidote is indeed described later, in dramatic terms, at 5.6.14–27 (**vulgate**). 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.

³¹² 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**. Dalhaṇa, on 5.1.78 (**vulgate**), 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.

his friends.³¹³ Before eating, he should drink the kinds of ghee called "Invincible" and "Immortal".³¹⁴ 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,³¹⁵ 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.³¹⁶
 - 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.

³¹³ The Carakasaṃhitā described "protecting the heart" (हृदयावरण) as drinking several sweet, oily drinks to surround the heart and keep it safe (6.23.46 (cara-trikamji3)). Dalhaṇa on 5.1.79–81 (vulgate) 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 (atha-1980).

³¹⁴ These ghee compounds are described in later chapters: see 5.2.47–49 (**vulgate**) and 5.6.13 (**vulgate**).

³¹⁵ Dalhana on 5.1.82 (vulgate) equated this with turpeth.

³¹⁶ 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, Dalhaṇa, remarked,

In spite of having made the greatest effort, it has been impossible to identify these plants. In the Himalayan regions, Kirātas and Śabaras are able to identify them.³¹⁷

Dalhaṇa 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.³¹⁸ Identifications have in many cases been equally impossible for us today.

One path for exploration in this situation is to attempt to reverseengineer some identifications by considering the known toxic plants of India.³¹⁹

³¹⁷ After *Suśrutasaṃhitā, kalpasthāna* 2.5 (**vulgate**). From the view of Sanskrit authors, Kirāṭas and Śabaras 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).

³¹⁸ See wuja-2003.

³¹⁹ 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 2002.³²⁰

Translation

- 1 And now I shall explain what should be known about stationary poisons.³²¹
- 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 $(k \circ \bar{i} r a)$, pith $(s \bar{a} r a)$, resin $(n i r y \bar{a} s a)$, the elements $(d h \bar{a} t u)$, and the tuber.
- 5 In that context,
 - the eight root-poisons are:322
 - 1. liquorice (?),³²³
 - 2. sweet-scented oleander,³²⁴
 - 3. jequirity,³²⁵
 - 4. false daisy,³²⁶

³²⁰ HIML: IA, 290-291.

³²¹ 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.

³²² 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).

³²³ 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."

³²⁴ The roots of sweet-scented oleander are highly toxic, as are most parts of the plant (pill-2019).

³²⁵ 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.

³²⁶ 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. (?),³²⁷ and ending with
- $6. ??.^{328}$
- 7. country sarsaparilla (?),³²⁹ and
- 8. medhshingi,³³⁰
- 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)ⁱ,
 - renuka (?)ⁱⁱ,
 - kurūkaka (?)iii,
 - 'little bamboo' (venuka) iv,331,

331 Not poisonous.

³²⁷ This poisonous root cannot at present be securely identified. Similar-sounding candidates include <code>karkaṭaka</code>, <code>karahāṭa</code> (emetic nut), and <code>karaghāṭa</code>, but since this is a prose passage, there would be no reason to alter the word to fit a metre. <code>moni-sans</code> cite an unknown lexical source that equates <code>karaṭa</code> (mn.) with safflower (<code>Carthamus tinctorius</code>, L.), but this plant does not have a poisonous root.

³²⁸ The roots of both rose and white leadwort are very toxic.

³²⁹ The text reads masculine *ananta*, which is not a plant name. Gayī's commentary on 5.2.5 (**vulgate**) 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.

³³⁰ **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-2021a**). 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 (**nadk-1982**). This identification is tenuous.

i unknown; see?

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

iii ?; see?

iv Bambusa bambos, Druce?; see NK #307

- thorn apple $(karambha)^{v}$,
- 'big thorn apple' (mahākarambha)vi,
- 'pleaser' (nandanā) vii,
- 'crow' (kāka) viii,
- the flower-poisons include those of:
 - rattan (vetra)^{ix},
 - wild chinchona (*kādamba*)^x,
 - black pepper $(vall\bar{\imath}ja \rightarrow marica)^{xi}$,
 - thorn apple (karambha)xii, and
 - big thorn apple (mahākarambha)^{xiii};
- the seven bark, pith $(s\bar{a}ra)$ and resin $(niry\bar{a}sa)$ poisons are:
 - 'gutboiler' (antrapācaka) xiv,
 - 'blade' (kartarīya)^{xv},
 - wild mustard (saurīyaka)^{xvi},
 - emetic nut $(karagh\bar{a}ta \rightarrow karah\bar{a}ta? \rightarrow madana)^{xvii}$,
 - thorn apple (*karambha*)^{xviii},
 - wild asparagus ($nandana \rightarrow bahuputr\bar{a}$?) xix , 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

xviiiDatura 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*)^{xx};³³²
- the three milky sap $(k \bar{s} \bar{t} r a)$ -poisons are:
 - purple calotropis ($kumudaghn\bar{\iota} \rightarrow arka?$)^{xxi},³³³
 - oleander spurge (*snuhī*)^{xxii}, and
 - 'web-milk' (jālakṣīri)^{xxiii};
- the two element (*dhātu*)-poisons are:
 - 'foam-stone' (phenāśma) xxiv, and
 - orpiment (haritāla) xxv;334
- the thirteen tuber-poisons are:
 - jequirity (*kālakūta*)^{xxvi},³³⁵
 - wolfsbane (vatsanābha)**xvii,

- 333 The name of this poison, kumuda-ghnī, 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.
- 334 **dutt-1922** conjectured that 'foam-stone' may be impure white arsenic obtained by roasting orpiment.
- 335 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.

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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
xxiiiunknown; see ?
xxivunknown; see ?
xxv Arsenii trisulphidum; see NK v. 2, p. 20 ff.
xxviAbrus precatorius, L.? Cf. RRS 21.14.; see AVS 1.10, NK #6, Potter 168.
xxviAconitum napellus, L.; see AVS 1.47, NK #42, Potter 4 f.
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³³² The bark of wild asparagus (Asparagus racemosus, Willd.) is toxic.

- Indian mustard (sarṣapa) xxviii
- leadwort $(p\bar{a}laka \rightarrow citraka)^{xxix}$,
- 'muddy' (kardama) xxx, the
- 'Virāṭa's plant' (vairāṭaka)xxxi,
- nutgrass (mustaka)^{xxxii}
- atis root (śrṅgīvisa) xxxiii
- sacred lotus (prapuṇḍarīka) xxxiv,
- radish (*mūlaka*)^{xxxv},
- 'alas, alas' (hālāhala) xxxvi,
- 'big poison' (*mahāviṣa*)^{xxxvii}, and
- galls (karkaṭa) xxxviii.336

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,

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xxviBrassica juncea, Czern. & Coss.; see AVS 1.301, NK #378
xxixPlumbago zeylanica (indica? rosea?), L.; see Rā. 6.124, ADPS 119, NK #1966, 1967
xxx unknown; see ?
xxxiunknown; see ?
xxxiCyperus rotundus, L.; see ADPS 316, AVS 2.296, NK #782
xxxiAconitum heterophyllum, Wall. ex Royle; see AVS 1.42, NK #39
xxxiNelumbo nucifera, Gaertn.; see Dutt 110, NK #1698
xxxxRaphanus sativus, L.; see NK #2098
xxxvinknown; see Cf. Soḍhalanighantu p.43 (sub bola) = stomaka = vatsanābha
xxxvinknown; see ?
xxxvRinus succedanea, L.; see NK #2136
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³³⁶ 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 (\$halahala\$) 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 \$halahala\$, 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 \$halahil\$ 'deadly (poison)' as a loan from Sanskrit). mayr-kurz also cites a claim for an Austro-Asiatic origin for the word.

writhing, and wheezing (śvāsa).

Fruit-poisons cause swelling of the scrotum, a burning feeling and writhing. Flower-poisons will cause vomiting, distension ($\bar{a}dhm\bar{a}na$) and sleep ($sv\bar{a}pa$).

The consumption of poisons from bark, pith $(s\bar{a}ra)$ and resin $(niry\bar{a}sa)$ will cause foul breath, hoarseness $(p\bar{a}ru\bar{s}ya)$, a headache, and a discharge of phlegm (kapha).³³⁷

The milky sap $(k \circ \bar{\imath} ra)$ -poisons make one froth at the mouth, cause loose stool, and make the tongue feel heavy.³³⁸ The element $(dh \bar{a} tu)$ -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 $(k\bar{a}lak\bar{u}\!\!\!/ta)^{xxxix}$, there is numbness and very severe trembling. With wolfsbane $(vatsan\bar{a}bha)^{xl}$, there is rigidity of the neck, and the faeces, and urine become yellow.

With sārṣapa $(s\bar{a}rṣapa)$,³³⁹ the wind becomes defective $(v\bar{a}tavaiguṇya)$, there is constipation $(\bar{a}n\bar{a}ha)$, and lumps (granthi) start to appear. With leadwort $(p\bar{a}laka \rightarrow citraka)^{xli}$, there is weakness in the neck, and speech gets jumbled.³⁴⁰

³³⁷ At 1.2.6 (**vulgate**), Dalhaṇa glosses hoarseness (*pāruṣya*) as *vāgrūkṣatā*, "a rough, dry voice."

³³⁸ At 6.54.10 (**vulgate**), Palhaṇa glosses loose stool (*viḍbheda*) as *dravapurīṣatā*, "having liquid stool."

³³⁹ *Sārṣapa* would normally mean "connected with mustard," and excessive consumption of mustard oil can be harmful. However, the *Sauśrutanighaṇṭu* (156) gives *rakṣoghnā* as a synonym for *sarṣapā*. This can be *Semecarpus anacardium*, L.f., which has some poisonous parts.

³⁴⁰ The verse in the Nepalese version ends with a plural verb that does not agree with the dual of the sentence subject.

xxxiAbrus 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' $(kardama)^{xlii}$, there is a discharge (praseka), the faeces pour out, and the eyes turn yellow. The 'Virāṭa's plant' $(vairāṭaka)^{xliii}$ 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 $(mustaka)^{.341}$

- With great aconite ($mah\bar{a}vi$;a) one's limbs grow weak, there is a burning feeling and swelling of the belly.³⁴²
- 16a With puṇḍarīka (puṇḍarīka), one's eyes go red, and one's belly becomes distended.³⁴³
- 16b With mūlaka ($m\bar{u}$ laka), one's body is drained of colour and the limbs are paralysed.³⁴⁴
- 17a With hālāhala (*Aconite*), a man turns a dark colour (*dhyāma*), and gasps.³⁴⁵
- With atis root $(\acute{srng\bar{i}vișa})^{xliv}$, one gets violent knots (granthi) and stabbing pains in the heart.³⁴⁶
- 18a With markaṭa (monkey), one leaps up, laughs, and bites. 347

-> ativișa

Look up the ca. reference.

³⁴¹ 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.

³⁴² 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.

³⁴³ 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 *Carakasaṇḥitāci.*23.12.

³⁴⁴ 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.

³⁴⁵ 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. (*Soḍhalanighantu* p.43). Dalhaṇa on 5.2.17 (**vulgate**) 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.

³⁴⁶ **gvdb** noted that *vatsanābha* and *śṛṅgīviṣa* are two different varieties of poisonous Aconites that are difficult to distinguish.

³⁴⁷ 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

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 (rūksa),
- hot,
- sharp,
- rarified (*sūkṣma*),
- fast-acting,
- pervasive (vyavāyin),
- expansive (vikāsin),
- limpid (viśada),
- light, and
- indigestible.
- 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.³⁴⁸
- Because it is fast-acting it kills quickly, and because of its pervasiveness it affects one's whole physical constitution (prakrti).³⁴⁹ Because of its expansiveness it enters into the humour (doṣa)s, bodily constiuents $(dh\bar{a}tu)$ 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.
- 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.

³⁴⁸ We read the active *vikaroti* with Dalhana against the transmitted passive *vikriyeta*, since it must be the parts of the body that are distorted, not the poison.

³⁴⁹ Palhaṇa on 5.2.22 (**vulgate**) explained this as "takes the form of pervading the whole body (*akhiladehavyāptirūpam*)."

- by itself,³⁵⁰ becomes a slow-acting poison $(d\bar{u}s\bar{t}visa)$.³⁵¹ 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.³⁵²
- 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.³⁵³ and it rapidly becomes inflamed on days that are nasty because of cold and wind.
- 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*).³⁵⁴ 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*),³⁵⁵ dwindling away (*kṣaya*) of flesh, swelling of the feet, hands, and face, the fever called *pralepaka*, vomiting and diarrhoea.³⁵⁶ The slow-acting poison might cause wheezing, thirst and fever, and it might also cause distension of the abdomen.
 - These various disorders are of many different types: one poison may produce madness, while another one may cause constipation $(\bar{a}n\bar{a}ha)$, and yet another may ruin the semen. One may cause emaciation, while

³⁵⁰ Dalhana specified that this refers to the ten qualities that are mentioned above (5.2.26 (vulgate)).

³⁵¹ Dalhaṇa cited this verse at 1.46.83 (**vulgate**) while explaining dūṣīviṣa.

³⁵² Similar symptoms of slow-acting poison are described at 2.7.11–13 (**vulgate**) in the context of contamination dropsy (*duṣyodara*). This this may explain why the vulgate inserted reference to this disease at this point.

³⁵³ The expression *ayathāyathoktān* "stated to be unsuitable" is hard to understand here, but is clearly transmitted in the Nepalese version.

³⁵⁴ Palhaṇa 5.2.30ab (**vulgate**) glossed "disjunction" as the loss of function of the joints in regard to movement.

³⁵⁵ The last ailment could perhaps be ringworm.

³⁵⁶ The *pralepaka* fever was described by Palhaṇa, at 6.39.52 (**vulgate**), as an accumulation of phlegm in the joints. Its symptoms are described in 6.39.54

- another pallid skin disease (kuṣṭha).
- Something is "corrupted" by repetitively keeping to bad locations, times, foods, and sleeping in the daytime. Or, traditionally, "corrupting poison" (slow-acting poison $(d\bar{u}s\bar{\imath}-visa)$) is so called because it may corrupt $(d\bar{u}sayet)$ the body tissue $(dh\bar{a}tu)s$.

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.
- In the second, he trembles, feels exhausted, has a burning feeling, as well as a sore throat. When the poison reaches the stomach $(\bar{a}m\bar{a}\hat{s}aya)$, it causes pain in the chest (hrd).
- In the third,his palate goes dry, he gets violent pain (\dot{sula}) in the stomach $(\bar{a}m\bar{a}\dot{s}aya)$, and his eyes become weak, swollen and yellow.
- In the fourth shock, it causes the intestines and stomach to be exhausted $(s\bar{a}da)$, he gets hiccups, a cough, a rumbling in the gut (antra), and his head becomes heavy too.
- 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.³⁵⁷

Remedies for the stages of slow poisoning

- 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.
- In the second, he should make the man who has vomited and been purged drink as before;

³⁵⁷ Here at 5.2.24 (**vulgate**) Dalhaṇa glossed *sannirodha* as "complete cessation, i.e., of breath" (*sannirodhaḥ samyaṇnirodhaḥ, ucchvāsasya iti śeṣaḥ*). The manuscripts all read *skanda* where *skandha* must be intended; this confusion is known from Buddhist Hybrid Sanskrit (**edge-1953**).

- on the third, drink an antidote and a beneficial nasal medicine (nasya) as well as an eye salve ($a\tilde{n}jana$).
- 42a In the fourth, the physician should make him drink an antidote that is salt with a little oil.³⁵⁸
- In the fifth, he should be prescribed the antidote together with a decoction $(kv\bar{a}tha)$ of honey and liquorice.
 - In the sixth, the cure (*siddhi*) is the same as for diarrhoea. And in the seventh, he perishes.³⁵⁹
- In between any one of these shocks, once the above treatment has been done, he should give the patient the following cold gruel $(yav\bar{a}g\bar{u})$ together with ghee and honey, that will take away the poison.
- 45–46 A gruel $(yav\bar{a}g\bar{u})$ made of the following items in a stewed juice $(ni\hbar k v\bar{a}tha)$ destroys the two poisons: luffa gourd, 360 wild celery, 361 velvetleaf, sunflower, 362 heart-leaved moonseed, myrobalan siris, and selu
 - 358 At 6.52.30 (vulgate) Dalhana noted that *sindhu* can be interpreted as salt (*saindhava*).
 - 359 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 अवसीदेत to the vulgate's अवपीड्य. The vulgate version is hard to construe, and we see Dalhana struggling to interpret it in his commentary on 5.2.43ab (vulgate). This sternutatory is, however, recommended in the Nepalese version at 5.5.30ab (vulgate), 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 $(k\bar{a}kapada)$ therapy (wuja-2003). The same is the case at 5.5.24 (vulgate) and the clear description at 5.5.45 (vulgate), in neither of which is the therapy supported in the Nepalese version. This therapy seems unknown to the Nepalese transmission. Perhaps the therapy migrated into the vulgate $Su\acute{s}rutasamhit\bar{a}$ from the $Carakasamhit\bar{a}$ 6.23.66–67 (cara-trikamji3).
 - 360 At 4.10.8 (**vulgate**) Dalhaṇa glossed कोशवती as देवदाली and at 4.18.20 (**vulgate**) as क-दुकोशातकी, vocabulary pointing to *Cucumis cylindrica*, *Cucumis actangula* or *Luffa echin*ata. See glossary under luffa.
 - 361 A plant often cited in <code>Suśrutasaṃhitā</code>, but rarely in <code>Carakasaṃhitā</code> (<code>gvdb</code>). Dalhaṇa glossed it here, 5.2.45 (<code>vulgate</code>), as <code>ajamodā</code>, wild celery, but noted that others consider it to be <code>moraṭa</code>, rajmahal hemp. There is considerable complexity surrounding the identification of <code>moraṭa/mūrvā</code> and related synonyms (<code>gvdb</code>). Taking <code>agnika</code> as a short reference to <code>agnimantha</code>, often identified as migraine tree, might be plausible, since that is antitoxic or anti-inflammatory, but such a short reference is not known elsewhere.
 - 362 At 5.2.45 (**vulgate**) Dalhaṇa said that this plant has leaves like the *paṭola*, pointed gourd, **gvdb** argued plausibly that this is a synonym for *arkapuṣpī*, panacea twiner, as Dalhaṇa also stated in 1.45.120 (**vulgate**), and the leaves of Holostemma and Trichosanthes are indeed strikingly similar. The appearance of the plant, a creeper with sun-

plum, white siris, the two kinds of turmeric,³⁶³ and the two kinds of poison berry,³⁶⁴ hogweed, peas, the three heating spices, the two kinds of Indian sarsaparilla³⁶⁵ and blue water-lily.

like flowers, fits the name. But there remains much controversy about the identities of these candidates (adps).

³⁶³ I.e., turmeric and Indian barberry.

³⁶⁴ I.e., poison berry and yellow-berried nightshade.

³⁶⁵ I.e., country sarsaparilla and black creeper.

The invincible ghee

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 turmerics,³⁶⁶ the two Indian nightshades,³⁶⁷ the two kinds of Indian sarsaparilla,³⁶⁸ beggarweed, and heart-leaf sida.

Curing the 'slow-acting' poison

- 50–52 Someone suffering from "slow-acting poison $(d\bar{u}s\bar{v}isa)$ " 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 $(d\bar{u}_{\bar{s}\bar{l}vi\bar{s}\bar{a}ri})$," and it is not prohibited in other situations.
- 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 antitoxic medicines.
 - For a prudent person, the slow-acting poison can be cured $(s\bar{a}dhya)$ immediately. It is treatable $(y\bar{a}pya)$ if it is of a year's standing. Other than this, it should be avoided for the person who eats unwholesome things.

³⁶⁶ I.e., turmeric and Indian barberry.

³⁶⁷ I.e., poison berry and yellow-berried nightshade.

³⁶⁸ 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 2002.³⁶⁹

Translation

- 1 And now we shall explain the rule (*kalpa*) that is the required knowledge about mobile poisons.³⁷⁰
- The full explanation about the sixteen carriers (adhiṣṭhāna) of the mobile poisons, that have been mentioned by me in brief, will be stated.³⁷¹
- 4 In that context, they are:³⁷²
 - 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 Kośa.

³⁶⁹ HIML: IA, 291–292.

³⁷⁰ In contrast to stationary, plant poisons. No reference is made to Dhanvantari (birc-2021).

^{371 &}quot;Carrier" for base, foundation (*adhiṣṭhāna*) aims to capture the idea that the author will describe the creatures in which poisons inhere.

³⁷² 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.

³⁷³ This interpretation comes from Dalhana on 5.3.4 (vulgate), but he reads विशिष्टेत.

(mukhasaṃdaṃśā),

- fart (avaśardhita),³⁷³
- anus,³⁷⁴
- bones,

- bile,
- bristles (*śūka*), and
- corpses.

5 In that context,

location of the poison	creatures ³⁷⁵
in their breath and gaze	divine snakes
in their fangs	the ones on earth ³⁷⁶
in their nails, mouths and fangs	cats, dogs, monkeys, men $(nara)$, 377 crocodiles, frogs, 'cook-fish' $(p\bar{a}kamatsya)$, 378 monitor lizards, cone snails $(\acute{s}amb\bar{u}ka)$, 'poisonous snakes' $(pracal\bar{a}ka)$, 379 geckos $(grhagodik\bar{a})$, 380 four-footed insects and others
in their urine and faeces	lice (kiṭipa), 'flat insects' (picciṭā), 'orange-dwellers' (kaṣāyavāsika), 'pepper snakes' (sarṣapaka), 'angry beetles' (toṭaka), dung beetles (varcaḥkīṭa), and 'pot insects' (kauṇḍinya)
in their semen	mice

³⁷⁴ Dalhana on 5.3.4 (vulgate) noted this reading.

³⁷⁵ Many of these names are mere dubious placeholders.

³⁷⁶ Dalhana on 5.3.5 (**vulgate**) cited the otherwise unknown authority Sāvitra on the topic of poisonous snakes (HIML: ???, ???).

³⁷⁷ Probably dittography from the previous word, monkey ($v\bar{a}nara$). But it is supported in both Nepalese witnesses, so it must go back to an earlier exemplar.

³⁷⁸ MS KL 699 separates the words पाक and मत्स्य with a daṇḍa, indicating that the scribe thought they were separate terms. Dalhaṇa thought this was a kind of fiery insect (5.3.5 (vulgate)).

³⁷⁹ *Arthaśāstra* 14.1.14, 23 (**oliv-2013**), where it might also be a chameleon, but the latter are not venomous.

³⁸⁰ 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 *Carakasaṃhitā* and elsewhere in literature. Hemacandra's *Abhidhānacintāmaṇi* (4.364) mentions that गृहगोधिका and गृहगोिलका are synonyms (radh-1876).

location of the poison	creatures
in their stings (śūla)	scorpions, 'earth scorpions' (viśvambhara), wasps (varaki), ³⁸¹ fish, crabs (ucciṭiṅga), and 'wing-scorpions' (patravṛścika)
in their saliva, nails, urine, feces, blood, semen and fangs	spiders
in the bites of their mouths	flies, wasps (kaṇabha) 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.³⁸² 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.³⁸³ He should try to purify that

³⁸¹ वरटी is a wasp; वरिक in the Nepalese MSS may be an alternant of this word. Dalhana on 5.3.5 (**vulgate**) remarked that some interpreted वरिकमत्स्य as two items, "wasp and fish," others as a single one, "wasp-fish."

³⁸² अस normally means "tears," but rarely means "blood."

³⁸³ 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 cutch 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.³⁸⁴
 - 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.³⁸⁵ And if there exists another path, he should go by that.³⁸⁶
 - 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 minerals³⁸⁷ together with gold and sarsaparilla, and a portion of of nutgrass equal to that,

^{384 &}quot;Swells up" translates an unclear reading that was probably शूयति, which may be an irregular form of $\sqrt{2}$, श्वा, श्वि (whit-root).

³⁸⁵ Our "alcoholic drinks" translates सुरा. For a discussion of this term at our period see mchu-2021a.

³⁸⁶ Palhaṇa on 5.3.12 (**vulgate**) 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."

^{387 &}quot;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, Dalhaṇa on 5.3.14 (vulgate) 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 Dalhaṇa 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 "śāstric" recension of the Arthaśāstra that is datable to 175–300 CE (oliv-2013) does not mention mercury (ibid, 534). See further the study by wuja-2013b.

together with the bile called "brown cow".³⁸⁸ 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.³⁸⁹
- 17 The smoke and air can be purified by putting into the air: lac, turmeric, Himalayan monkshood, and myrobalan, with Himalayan mayapple, costus, cardamom,³⁹⁰ and peas, and beautyberry.

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

The origin of poison

- 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.³⁹¹
- 19 Pitiless Fury took a body and burst out of the mouth of furious Brahmā's store of fiery energy.³⁹²
- 20 He burned that great, thundering, apocalyptic demon. Then, after bringing about the annihilation of that demon, his amazing fiery energy increased.
- And so, there was a sinking down $(vi \not= a\bar{d}a)$ of the Daityas. Observing that, it was named "poison $(vi \not= a)$ " because of it's ability to produce a "sinking down."
- 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,

³⁸⁸ सुरेन्द्रगोप and कुरुविन्द are both uncertain, see index. Dalhaṇa's opinion has been followed here, but it seems fair to say that all commentators were guessing.

³⁸⁹ The syntax of this verse is somewhat loose; the vulgate has regularized it, smoothing out the difficulties.

³⁹⁰

³⁹¹ 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**.

^{392 &}quot;Fury" is here anthropomorphised.

- whatever substance a poison reaches, it establishes itself there and by its nature it takes on that substance's savour.³⁹³
- 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.³⁹⁴
- 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.³⁹⁵
- 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 tHaving come upon a body,³⁹⁶ 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 admissable after three quarters of an hour, but without the poisoned arrow and the snakebite.
 - 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.] ³⁹⁷

³⁹³ The scribal emendation in MS Kathmandu NAK 5-333 of नियच्छित to निगच्छित suggests that the scribe had more than one manuscript before him, one of them representing the reading of the vulgate recension.

³⁹⁴ Probably a reference to the five breaths. Dalhana referred to winds (বার), but this does not seem correct since it is a reference to humours rather than breaths.

³⁹⁵ The verb पठ् "is declared, read aloud" here could possibly suggest that the author is working within a written, not oral, tradition.

^{396 &}quot;Having come upon" translates प्रख्याप्य, which is hard to interpret unless it is a rare form connected with the sense "to see."

³⁹⁷ *Mādhavanidāna*, 69.20–21 (**madhava1**) has verses that are directly parallel to this section:

darvīkarāṇāṃ 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.

398

- [ślokas 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 $(grhadh\bar{u}ma)$ with wind, 399 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.⁴⁰⁰

Patients beyond help

- 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,⁴⁰¹ under the Great Bear and people who have been bitten in lethal spots.
- 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. †...

vrddheşu bubhukşiteşu 20

kṣīṇakṣate mohini kuṣṭhayukte rūkṣe 'bale garbhavatīṣu cāpi

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

³⁹⁸ At this point, witness H inserts a marginal Indravajrā verse about diseases that afflict immoral women.

³⁹⁹ गृहधूम is not a plant in this context *pace* moni-sans. See the discussion in note 305, p. 96.

⁴⁰⁰ Palhaṇa 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 (vulgate)). But the sense of the Nepalese MSS is the opposite.

⁴⁰¹ याम्ये means "southerly" but Dalhaṇa on 5.3.38 (**vulgate**) interpreted it as "in Yama's direction" as "under the seventh asterism."

material corresponds to SS.1.45.205al where it describes how alcohol affects the body. 39.2

3.4ocd-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,⁴⁰² 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,⁴⁰³
- 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.⁴⁰⁴

⁴⁰² Dalhaṇa, on 5.3.40 (**vulgate**), glossed लताभिस् "by means of whips," as "when the body is struck by whips."

⁴⁰³ nāsāvasāda & plural sakaņthabhangāḥ

⁴⁰⁴ The grammatical verb-form परिवर्जयोत "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 देष्ट्रा does not mean human teeth (दन्त). We therefore prefer to interpret this as a patient where the fangs of a venemous creature remain in the bitewound. This requires construing the expression as a bahuvrīhi compound: देष्ट्रा or देष्ट्र + 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 2.405

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.⁴⁰⁶ 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.⁴⁰⁷ **fayr-1874** provided a biological taxonomy of snakes as well as chapters on mortality statistics during the

⁴⁰⁵ On the idea of notational variants in scientific translation, see elsh-2008saru-2016wuja-2021.

⁴⁰⁶ HIML: IA, 292–294. In addition to the translations mentioned by Meulenbeld (HIML: IB, 314–315), a translation of this chapter was included in **shar-1999**. 407 **fayr-1874**, first published in 1872.

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. 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 *Suśrutasaṃhitā* too recognized the emotional and somatic effects of fright (see note 420 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 *Suśrutasaṃhitā's Kalpas-thāna* 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 *Suśrutasaṃhitā* does.⁴⁰⁹ But unlike the *Suśrutasaṃhitā*, in the *Kriyākālaguṇottara* the chief taxonomic principle for both groups is the four *varnas*.

A discussion of this chapter specifically in the light of the Nepalese manuscripts was published by Harimoto. 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.

Translation

1 Now we shall explain the procedure (*kalpa*) about what should be known concerning the venom in those who have been bitten by

⁴⁰⁸ 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). 409 **slou-2016**.

⁴¹⁰ hari-2011.

⁴¹¹ The two editions that Harimoto noted, vulgate and bhat-1889, present identical texts.

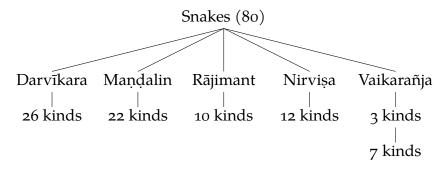


Figure 1: The taxonomy of snakes in the vulgate, 5.4.9–13ab (**vulgate**).

snakes.412

- 3 Suśruta, grasping his feet, questions the wise Dhanvantari, the expert in all the sciences.
- 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 successive shocks (*vega*) of poisoning".⁴¹³
- 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.⁴¹⁴

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.⁴¹⁵

⁴¹² The Sarvāngasundarī, commenting on 1.16.17 (kunt-1939), glossed कल्प as प्रयोग.

⁴¹³ The expression "successive shocks" translates वेग, which is 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.

⁴¹⁴ The next few verses are discussed in detail by **hari-2011**, who shows that in the taxonomy of snakes, the Nepalese version of the *Suśrutasaṃhitā* has greater internal coherence than the vulgate recension.

⁴¹⁵ hari-2011 translated these names as "hooded," "spotted," "striped," "harmless," and

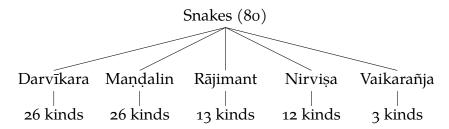


Figure 2: The taxonomy of snakes in the Nepalese version.

- 11 "Of those, there are twenty and six hooded snakes, and the same number of Maṇḍalins are known. There are thirteen Rājīmats.⁴¹⁶
- "There are said to be twelve Niriviṣas and, according to tradition, three Vaikarañjas.
- "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".⁴¹⁷
 - "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,⁴¹⁸ accompanied by a little ring of spots (*cuñcumālaka*),⁴¹⁹ lead to degeneration, and are

Or "There phaṇins and 6 maṇḍalins number are known There Rājīmats." Or even, "there are 20 Phaṇins and six of them are Maṇḍal-ins." Are phanins really the same as darvīkaras?

[&]quot;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 *Suśrutasaṃhitā*.

⁴¹⁶ The phrasing of this śloka is awkward.

⁴¹⁷ This might refer to constriction. The phrase reads like a commentarial addition rather than the main text of the *Suśrutasaṃhitā*.

⁴¹⁸ The word उद्गृत "aroused" was glossed by Dalhaṇa at 5.4.15 (vulgate) as उन्मोद्य, 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 √muṭ "break" or mūṭa/mūṭa "woven basket." Perhaps it is related to the Tamil போடி (mōṭi,) whose meanings include "arrogance, grandeur, display" (burr-1984) or to faintly-documented forms like moṭyate "is twisted" (CDIAL). Dalhaṇa's उन्मोद्य 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 (**vulgate**) when describing the marks on the body where a knife scarifies the skin before leeching. See footnote 48.

⁴¹⁹ The usual dictionary lexeme is चञ्चु , not चुञ्चु as in the Nepalese witnesses. We translate "spots" following Dalhana and Gayadāsa on 5.4.15 (**vulgate**), where they described a group of spots or swellings at the site of the bite. On the history of the word **मालक**,

close together and swollen.

Where there are streaks with blood, whether it be blue or white, the grammar physican should recognize that to be "torn (darita)," having a small amount of venom.

- 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.
- The wind of a timid person who has been touched by a snake can get irritated by fear. It causes swelling. 420 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, ⁴²¹ gods, holy sages, spirits, and saints, or in places full of herbs that destroy poison.⁴²²

[Types of snake]

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

see kief-1996.

420 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.

421 Dalhana on 5.4.21 (vulgate) identified the सुपर्ण as a गरुड. On the bird called सुपर्ण, dave too noted that it may be a synonym for Garuda, and in some contexts may refer to the Golden Eagle, Golden Oriole, Lammergeyer, etc. dave noted again that the Garuda 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*.

422 For "spirits" the Nepalese version has भूत while the vulgate reads यक्ष.

Rājimant snakes are smooth and traditionally said to be, as it were, mottled with multicoloured streaks across and above.

[Classes of snake]

- 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 Brāhmana caste.
- 26 Warrior snakes, however, are those that look glossy and get very angry. The 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.
- Any snakes that are coloured like a buffalo and a tiger, with rough skin and different colours are known as servants.⁴²³
- 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.⁴²⁴
- 29 Wind is irritated by all hooded snakes; bile by Maṇḍalins and phlegm by those with many stripes.
- Because of the two classes having greater, lesser or equal class, there is the characteristic of irritating two humours.

 And he will explain the enposing view that is to be known as a result
 - And he will explain the opposing view that is to be known as a result of the non-union of a male and female.⁴²⁵

[Enumeration of snakes]

- 34.1 In that context, here are the Darvīkaras.
 - 1. The Black snake (*kṛṣṇasarpa*); 3. The Black Belly (*kṛṣṇodara*);
 - 2. The Big Black (mahākṛṣṇa); 4. The All Black (sarvakṛṣṇa);⁴²⁶

⁴²³ Presumably "different" from the earlier-mentioned castes.

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

⁴²⁴ 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.

⁴²⁵ The sense of the last phrase here is quite different from the vulgate, which says only that "details" will be explained below.

⁴²⁶ Not in vulgate.

⁴²⁷ The vulgate adds The Big Pigeon (mahākapota).

- The White Pigeon Here Time the roll Annotatins 34.2 (śvetakapota);427 (dadhimukha); The Rain Cloud (valāhako); The Lotus Mouth 18. 7. The Great Snake
- (mahāsarpa);
- 8. The Conch Keeper (śamkhapāla);
- The Red Eye (lohitāksa);
- The Gavedhuka (gavedhuka);
- 11. The Snake Around (parisarpa);
- 12. The Break Hood (khandaphana);
- The Kūkuṭa (kūkuṭa); 13.
- The Lotus (padma);
- The Great Lotus 15. (mahāpadma);
- 16. The Grass Flower (apuṣpa);

- (pundarīkamukha);
- The Brown Hut Mouth 19. (babhrūkutīmukha);
- The Variegated (vicitra); 20.
- The Flower Sprinkle Beauty 21. (puṣpābhikīrnnābha);
- The Mountain Snake 22. (girisarpa);
- The Straight Snake 23. (rjusarpa);
- The White Rip (*śvetadara*); 24.
- The Big Head (mahāśīrṣa); 25.
- The Hungry Sting (alagarda); 26.

⁴²⁸ This seems implausible, but otherwise the list of Mandalins would be short. 429 The list is short by one item. Perhaps the one of the snakes named in the vulgate, citramandala, gonasa or pingala, should be considered here.

1. The Mirror Ring 13. The Morning Glory	y
(ādarśamaṇḍala); (pālindaka);	(\).
2. The White Ring 14. The Stretch (tantuk	•
(śvetamaṇḍala); 15. The Pale as a Flower	er
3. The Red Ring (raktamaṇḍala); (puṣpapāṇḍu);	
4. The Speckled (<i>pṛṣata</i>); 16. The Six Part (<i>ṣaḍaṅ</i>	· .
5. The Gift of God (<i>devadinna</i>); 17. The Flame (<i>agnika</i>)	•
6. The Pilindaka (<i>pilindaka</i>); 18. The Brown (<i>babhru</i>	,
7. The Big Cow Snout 19. The Ochre (kaṣāya)	
(vṛddhagonasa); 20. The Khaluṣa (khalı	
8. The Jackfruit (panasaka); 21. The Pigeon (pārāva	,
9. The Big Jackfruit 22. The Hand Decorat	ion
(mahāpanasaka); (hastābharaṇaka);	
10. The Bamboo Leaf 23. The Tatra (tatra);42	:8
(veṇupatraka); 24. The Mark (citraka)	;
11. The Kid (śiśuka); 25. The Deer Foot (е́лі́	pada). ⁴²⁹
12. The Intoxicator (madanaka);	•
34.3 Here are the Rājīmats. ⁴³⁰	
1. The Lotus (puṇḍarīka); 7. The Grass Drier (tạ	rṇaśoṣaka);
2. The Stripe Speckle (<i>rājicitra</i>); 8. The White Jaw (<i>sve</i>	etahanu);
3. The Finger Stripe (aṅgulirāji); 9. The Grass Flower	
4. The Two Finger Stripe (darbhapuṣpa); ⁴³¹	
(dvyangulirāji); 10. The Red Eye (lohita	ākṣa); ⁴³²
5. The Drop Stripe (bindurāji); 11. The Ringed (cakrak	ca);
6. The Mud (<i>kardama</i>); 12. The Worm Eater (<i>k</i>	kikkisāda);
34.4 Here are the Nirviṣas.	
1. The Rain Cloud (<i>valāhako</i>); ⁴³³ 6. The Ilikinī (<i>ilikinī</i>)	;
2. Thei Snake Flag (ahipatāka); 7. The Year-Snake (va	arṣāhīka);
3. The White Leaf (śukapatra); 8. The Two-day (dvyā	īhika);
4. The Goat Swallower 9. The Milk Flower	•
(ajagara); (kṣīrikāpuṣpa);	
5. The Stimulator $(d\bar{\imath}pyaka)$; 10. The Flower All $(pu$	ıṣpasakalī);

⁴³⁰ 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.

⁴³¹ Also in the Darvīkara list.

⁴³² Also in the Darvīkara list.

⁴³³ Also in the Darvīkara list.

- 11. The Chariot of Light (jyotīratha);
- 12. The Little Tree (*vṛkṣaka*);
- 34.5 The Vaikarañjas originate out of contrary unions amongst the three colours. 434 Thus:
- varṇa means "col our" elsewhere?

- 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.

- Amongst them, males have large eyes, tongues and heads. 435 Females have small eyes, tongues and heads. Neuters have both characteristics, and are slow to exert themselves or be angry. 436
- 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.⁴³⁷ And ignored for even a period of time, it can drag the patient away. There is not even an opportunity to follow the literature.⁴³⁸ And when the symptom of being bitten is stated, there will be

⁴³⁴ The word *varṇa* in this chapter normally means "colour" not "class." ("Class is expressed by "jāti.") While *kṛṣṇasarpa* is clearly a colour-type, it is less obvious that *gonasī* is a special colour, and *rājimat* is a group of snakes.

⁴³⁵ The vulgate includes the snake's mouth in this and the next list.

⁴³⁶ The reading मन्दचेष्टाक्रोधा is an awkward compound; possibly the original reading was मन्दचेष्टाः + अक्रोधा and sandhi was applied twice.

⁴³⁷ 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.

⁴³⁸ The idea seems to be that there is no time to consult the verbose āyurvedic teachings. The "extensive meaning of the literature (वाक्समूहार्थविस्तार)" is singled out as one of Āyurveda's virtues in 5.8.142 (vulgate). Alternatively, perhaps the patient is unable to understand what the doctor is saying to him.

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". 439

[Symptoms of snakebite]

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 are blocked and there is every kind of pain due to wind.

The poison of a Maṇḍali, on the other hand, causes the skin, nails, eyes, teeth, mouth, urine, feces, bitemark to be yellow; there is a desire for cold, a temperature, giving off fumes, 440 a burning feeling, thirst, intoxication, fainting, fever, the appearance of blood, and the sagging down of flesh and fat above and below. There is swelling, suppuration of the bite, confused vision, the patient is angry and every kind of pain due to bile.

The poison of a Rājimat, on the other hand, 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 in the limbs and swelling at the site of the bite. There is a discharge of viscous phlegm, vomiting, itchy eyes, and a rattling sound. The breath is stifled and there is every kind of pain due to phlegm.

⁴³⁹ In the next passage, the symptoms of snake poisoning are indeed explained under three headings.

⁴⁴⁰ The term "giving of fumes (परिधूपायन)" is not in **moni-sans** as such, although परिधूपन, परिधूमन अन्द् परिधूमायन are cited and referred to the *Suśrutasaṃhitā*. giving off fumes (परिधूपन) is listed at *Suśrutasaṃhitā* 2.6.13 (**vulgate**) amongst the symptoms of urinary disease caused by phlegm. The editors note a variant reading परिधूमायन but do not tell us in which manuscript (**vulgate**). Dalhaṇa on 2.6.13 (**vulgate**) glossed the term as "hot all over (समन्ततस् तापः)" and in our current passage as "hot over the whole body (सर्वाङ्गसन्तापः)" (**vulgate**). See also **josi-maha**: धूमायन "अङ्गानां धूमोद्गमनमिव" citing the *Suśrutasamhitā*.

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, urinates with blood. One bitten by a hungry snake craves food. Those bitten by an old snake have delayed and slow reactions. And those bitten by a young snake are fast and sharp. One bitten by a non-venomous snake has the characteristic marks of non-poisoning. Some say that one bitten by a blind snake becomes blind. A constrictor (ajagara) is deadly because it swallows, not because of poison.

In that context, amongst all snake toxins there are seven toxic impulses (*viṣavega*). Thus, the first toxic impulse amongst Darvīkaras corrupts the blood. That corrupted blood turns black. Because of that, there is blackness and a feeling of ants crawling about on the body develops. In the second pulse, it corrupts the flesh. That causes extreme blackness and lumps.



Uttaratantra 17: Preventing Diseases of the Pupil

Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.⁴⁴¹

The history of couching in India has been discussed since the nineteenth century, 442

Translation

- 1 Now I shall explain the counteraction (*pratiṣedha*) of diseases located in the pupil (*drsţi*).
- There are three curable $(s\bar{a}dhya)$, three incurable $(as\bar{a}dhya)$, and six mitigatible $(y\bar{a}pya)$ diseases located in peoples eyes. Among these, three are curable $(s\bar{a}dhya)$. Amongst these three, the remedy $(prat\bar{\imath}k\bar{a}ra)$ has been stated for the one called "seeing smoke $(dh\bar{\imath}madarsin)$ ".⁴⁴³
- 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 ($a\tilde{n}jana$), liniment ($\bar{a}lepa$), and medicines cooked in a

⁴⁴¹ HIML: IA, 305-306.

⁴⁴² desh-2000; desh-1999; bret-1826; leff-2020; shas-kaly; jack-1884; scot-1817; elli-1918; hend-1895; fan-2005; wuja-2003.

⁴⁴³ This disease and its cure are described earlier (SS.6.7.39 and SS.6.10.16 (**vulgate**) respectively). The latter part of this verse is hard to construe and the text here may have been altered at an early period.

where is cutting with a knife related to removing bile or phlegm. crucible (puṭapāka), together with an eyewash (tarpaṇa),⁴⁴⁴ but not cutting with a blade (śastrakṣata).⁴⁴⁵

One should drink ghee (sarpis) prepared with the three fruits ($triphal\bar{a}$) and in the first [case where the problem is bile], and prepared with turpeth (traivrta) 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;
- Cow's flesh (*gomāṃsa*), black pepper (*marica*), siris (*śirīṣa*) and red arsenic (*manaḥśilā*);
- stalk (vrnta) from a wood apple (kapittha) with honey (madhu);⁴⁴⁶
- or the the fruits of the velvet bean (*svayaṃgupta*).
- 8 The physician should make a collyrium with ground up metal (*kupyaka*),⁴⁴⁷ 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 harenu (*harenu*) 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.

- Filaments ($ki\tilde{n}jalka$) of Indian lotus (nalina) and blue lotus (utpala), with ochre (gairika), and the juice of cow-dung ($go\acute{s}akrt$) are a collyrium in the form of a pill ($gu\acute{q}ik\bar{a}$). This is good for both day and night blindness.
- 11cd–12ab Elixir-salve ($ras\bar{a}\tilde{n}jana$), honey (kṣaudra), ghee, scramberry ($t\bar{a}l\bar{i}\acute{s}a$), together with gold and ochre, with the juice of cow-dung ($go\acute{s}akrt$) are for

burned charcoal. Find refs.

⁴⁴⁴ These therapies are described in SS.6.18 (vulgate).

⁴⁴⁵ Dalhaṇa interpreted this as blood-letting (*sirāvedha*), which is discussed in SS.1.14 (**vulgate**).

⁴⁴⁶ Wood apple (कपित्थ) in this verse is ablative singular or accusative plural, neither of which construe obviously.

⁴⁴⁷ A metal other than gold or silver, according to **josi-maha**. Perhaps lead, which is used in making contemporary collyrium.

- an eye afflicted with bile.
- Alternatively, wise physician should first grind together elixir-salve $(s\bar{\imath}ta)$ and stibnite $(sauv\bar{\imath}raka)$, infused $(bh\bar{a}vita)$ with the blood of birds and animals (rasa). 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.
 - Thus, a collyrium of white teak ($k\bar{a}r\acute{s}mar\bar{\imath}$) flowers, liquorice (madhuka), tree turmeric ($d\bar{a}rv\bar{\imath}$), lodh tree (lodhra) and elixir salve ($ras\bar{a}\~njana$) is always good as a collyrium in this case.
 - Alternatively, for those who cannot see during the day, this pill $(gu\dot{q}ik\bar{a})$, with sandalwood, is recommended: salt $(nad\bar{\imath}ja)$, conch shell and the three spices, collyrium, realgar $(mana\dot{n}\dot{s}il\bar{a})$, the two turmerics $(rajana)^{449}$ and liver extract $(yakrdrasa)^{.450}$
 - One should grind up kohl (*srotoja*),⁴⁵¹ and Sind salt (*saindhava*) and long pepper and also harenu (*harenu*). 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 $(k\bar{a}l\bar{a}nus\bar{a}riva)^{452}$ long pepper, dried ginger $(n\bar{a}gara)$ and honey, the leaf of the scramberry $(t\bar{a}l\bar{i}\acute{s}apatra)$, the two turmerics (rajana), a conch shell and liver extract (yakrdrasa). Then shade-dried wicks take away illness (ruj).
- 18cd–19ab Wicks made of red arsenic ($mana h sil \bar{a}$), chebulic myrobalan ($abhay \bar{a}$), the three spices (vyo sa). Indian sarsaparilla ($s\bar{a}riva$), cuttlefish bone (samudraphena), combined with goat's milk are good.
- One should cook a honey collyrium ($k = audr \bar{a} \tilde{n} = audr \bar{a}$) either in the juices of cow's urine ($gom \bar{u}tra$), and bile, spirits ($madir \bar{a}$), liver (yak = rt), and emblic ($dh \bar{a}tr \bar{t}$) or else in the juice of the liver (yak = rt) of something different, or else with the extract of the three fruits ($triphal \bar{a}$). One of these

⁴⁴⁸ This was Palhaṇa's preferred interpretation of rasa "juice" in this context. He also noted that some take elixir-salve ($s\bar{\imath}ta$) to be camphor.

⁴⁴⁹ 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.

⁴⁵⁰ This verse appears as no. 27 in the vulgate.

⁴⁵¹ Glossed by Dalhana as a kind of collyrium. Cf. nadk-1954 and shar-1982

⁴⁵² 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.

- should be mixed with cow urine, ghee and cuttle fish $(arṇavamala)^{453}$ with long pepper, honey and box myrtle (kaṭphala). It is placed in sea salt and stored in a bamboo tube.
- 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.
 - Alternatively, a collyrium that is harenu (harenu) mixed with long pepper ($m\bar{a}gadh\bar{\iota}$), the bone and the marrow of a goat, cardamom ($el\bar{a}$) and liver, together with liver extract, is good for eyes afflicted by phlegm.⁴⁵⁴
 - 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.⁴⁵⁵
- 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*).
 - When an eye-disease is caused by wind (*pavanodbhava*) they say that castor oil (*pañcāṅgulataila*) mixed with milk is good.⁴⁵⁶ In the case of diseases of blood (*śonita*) and bile (*pitta*), one should drink ghee with the three fruits; it is particularly cleansing.⁴⁵⁷ In the case of phlegm,

⁴⁵³ At SS 6.12.31, Dalhaṇa glossed *arṇavamala* as cuttlefish bone (*samudraphena*). It may be worth considering whether the unusual term *arṇavamala* "ocean-filth" might refer to ambergris.

⁴⁵⁴ On the identities of <code>elā</code> and <code>hareṇu</code>, <code>watt-comm</code> described the former as "true" or "lesser" or "Malabar" cardamom, <code>Elettaria cardamomum</code>, Maton & White. In contrast, the "greater" cardamom is <code>Amomum subulatum</code> (that Watt discussed on p. 65) that is commonly used as an inferior substitute for <code>E. cardamomum</code>. <code>gvdb</code> provided an interesting discussion of <code>hareṇu</code>, noting that the term refers to two substances, first the <code>satīna</code> pulse (<code>Pisum sativum</code>, Linn.), and second an unknown fruit such as perhaps a <code>Vitex</code>. They noted, "None of the text commentators have attempted to disclose the nature of its source plant," although Dalhaṇa described it as aromatic and identical to <code>reṇukā</code> (SS.ci.2.75).

⁴⁵⁵ 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.

⁴⁵⁶ Palhana said that the unexpressed topic of this recipe is partial blindness (*timira*).

⁴⁵⁷ Blood-bile (śonita-pitta, rakta-pitta) is a widely-recognized disease in ayurveda, but

- a purgative by means of turpeth (trivrt) is recommended. In the case of all three humours, sandal (sugandhi) in oil is prepared with it (turpeth).
- In cases of partial blindness (*timira*), aged ghee is recommended. It is good if it is kept in an iron vessel.
- 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 blindess should lick the finely-ground three fruits mixed with ghee off his hand (sapāṇa). 459
 - 29cd Alternatively, someone afflicted by phlegm should apply them (the three fruits) mixed with oil and steeped (*pragāḍha*) in honey.
 - 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 (trivrt) based on strong mallow $(atibal\bar{a})$, and country mallow $(bal\bar{a})$ in an errhine (nasya).⁴⁶⁰
 - Ghee which has been extracted from milk cooked with the meat of aquatic creatures and those from marshlands should be prescribed.
 - tAn enclosed roasting (puṭākhya) with Sindh salt and the product of the meat of a carnivore (kravyabhuj) and a deer (eṇa), is combined with honey and ghee.⁴⁶¹

the compound here is definitely dual, which rules out that interpretation. One would expect blood-bile because the previous verse

The term 'enclosed roasting' (puṭapāka) does occur in the Suśrutasaṃhitā in the

⁴⁵⁸ 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.

^{459 &}quot;Off his hand" translates the adverbial *sapāṇam*, an unusual word. Dalhaṇa reproduced a reading close to the Nepalese recension but says that Jejjaṭa rejects it and so he also does (**vulgate**).

^{460 &}quot;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.

⁴⁶¹ Dalhaṇa noted (**vulgate**) that *puṭāhvaya* (see verse 35 below) is a synonym for *puṭapāka*, and that the process is described in the *Kriyākalpa* chapter, i.e., SS.6.18.33–38 (**vulgate**). On the *puṭa* process in the *Suśrutasaṃhitā*, which is earlier and different than that of *rasaśāstra* literature, see the discussion by **wujad-2019**:

- Fat $(vas\bar{a})$ from a horse, a vulture, a snake, and a cock $(t\bar{a}mrac\bar{u}da)$, combined with mahua $(madh\bar{u}ka)$ is always good in a collyrium.^{†462}
- Having prepared (*niṣevita*) a collyrium made of kohl (*srotas*) and gradually combine it with juices (*rasa*), milk and ghee.⁴⁶³
 For thirty days, this collyrium is put in the mouth of a black snake that is covered with kuśa grass (*kuśa*).
- Next, a collyrium that is milk containing long pepper $(m\bar{a}gadh\bar{\iota})$, lye $(k \!\!:\!\! \bar{a}raka)$ and Sindh salt (saindhava) that has been repeatedly prepared with the mouth of a black snake, is good in the case of bloodshot blindness $(r\bar{a}gin\ timira)$.
- 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*).⁴⁶⁵
- 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*).⁴⁶⁶
 - Alternatively, experts on this say that finely ground blue vitriol (*tuttha*) extracted from a gold mine is the "same collyrium (*samāñjana*)".⁴⁶⁷

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.

- 462 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.
- 463 Dalhana specified that the juices are meat soups of various animals (vulgate).
- 464 Dalhana described this blindness as a type of $k\bar{a}ca$ disease caused by wind (**vulgate**). 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.
- 465 The expression taken hot (puṭāhvaya) is a guess.
- 466 The expression liquid collyrium (*dravāñjana*) is only known from Dalhaṇa's comments on 6.17.11ab (**vulgate**). The recipe in the present collyrium is different from that discussed by Dalhaṇa.
- 467 On *tuttha*, which may also be identified with zinc oxide or as crushed sea-urchin shells, see **falk-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 Dalhaṇa as "a collyrium with an equal amount of fermented barley" (*tulyasauvīrāñjana*) (**vulgate**).

Conch mixed with equal parts of sheep's horn and stibnite (añjana) removes the impurity of the glassy opacity ($k\bar{a}ca$) because of the application of collyrium (añjana).⁴⁶⁸

- The extracts (rasa) produced from aflame of the forest (palāśa), Rohīta tree (rohīta),469 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 (priyangu) to pacify eye diseases caused by phlegm.⁴⁷⁰ One should apply smoke of the bark of embelia (vidanga), velvet leaf
 - $(p\bar{a}th\bar{a})$, white siris $(kinih\bar{\iota})$, and desert date $(ingud\bar{\iota})$; and cuscus grass (*uśīra*) alone.
- 39 A ghee that is cooked (*bhāvita*) from a decoction of a non-flowering tree (vanaspati)⁴⁷¹ 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 (jāngala)472 and a plentiful amount of long pepper (*māgadha*), Sindh salt and honey.
- 40 A treatment ($kriy\bar{a}$) with realgar ($manah\acute{s}il\bar{a}$), the three spices, conch, honey, along with Sindh salt, green vitriol (kāsīsa) and elixir salve $(ras\bar{a}\tilde{n}jana).473$
 - They say that an elixir salve (rasānjana) combined with myrobalans, treacle and dried ginger is good.⁴⁷⁴
- 41 Alternatively, a collyrium that has been prepared many times in the eight types of urine⁴⁷⁵ is put into water with the three fruits. Having find ref. stored it in the mouth of a nocturnal creature (niśācara)⁴⁷⁶ one should

⁴⁶⁸ The ablative "from collyrium" is hard to construe, but Dalhana used this term and phrase in his commentary on 6.17.41ab (vulgate).

⁴⁶⁹ Probably Soymida febrifuga A. Juss.

⁴⁷⁰ Palhaṇa invoked a general rule $(paribh\bar{a}s\bar{a})$ to indicate that this mixture should be cooked with sesame oil.

⁴⁷¹ These are fig trees. The Sauśrutanighantu (252) specifies the Udumbara. Cf. the classification in CS.1.1.71–72, 1.8, *et passim*.

⁴⁷² On this term, see SS.1.35.42 (vulgate) and the discussion by zimm-1999.

⁴⁷³ Dalhaṇa glossed treatment ($kriy\bar{a}$) specifically as inspissation ($rasakriy\bar{a}$) (**vulgate**).

⁴⁷⁴ We emend हिते to हितम्, against the MSS.

⁴⁷⁵ See Suśrutasamhitā mūtravarga

⁴⁷⁶ Palhaṇa glossed nocturnal creature (niśācara) as "vulture," although elsewhere in the Suśrutasamhitā it is more commonly interpreted as a spirit or demon. In the present

- place it in a conch (salilotthita) for two months.477
- One should apply that collyrium together with the flowers of mahua $(madh\bar{u}ka)$ and horseradish tree $(\acute{s}igru)$ 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 $(ml\bar{a}yin)$.⁴⁷⁸
- For one who has a humour, the physician should consider the rule in all humoral cases and then smear the ointment on the face. The treatment that is good for removing watery eye (*syanda*) should be properly applied in all these humoral cases, according to the individual.
- 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.⁴⁸¹
- 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*).
- 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.
- 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 ($r\bar{a}gini\ timire$) in the second layer, with difficulty. And in the third layer it can be mitigated ($y\bar{a}pya$).⁴⁸²

Check out these refs.

meaning of kalpa

context, following verses 33 and 34, it is probably a snake.

⁴⁷⁷ We interpret "water-born (*salilotthita*)" as "conch" in line with *jalodbhava*, but the term is uncertain.

⁴⁷⁸ The vulgate follows Þalhaṇa 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.

⁴⁷⁹ The vulgate edition omits part of this verse (ab) combining earlier and later passages.

⁴⁸⁰ The term watery eye (*syanda*) refers to the specific disease *abhiṣyanda*. See SS.6.6.5, 1.46.51, etc.

⁴⁸¹ Dalhana noted that *Kalpa* means the Uttaratantra adhyāya 18 (**vulgate**).

⁴⁸² Although the text says with difficulty (*kṛcchra*), the implication is that it is untreatable

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.⁴⁸³
- 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 $(muktv\bar{a})$ two white sections from the black part (krsna) and from the outer corner of the eye $(ap\bar{a}nga)$. Then he should press $(p\bar{i}d-)$ properly into the eye,⁴⁸⁴ at the naturally-occurring (daivakrte) opening (chidra) with a probe $(sal\bar{a}k\bar{a})$ 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.⁴⁸⁵
- The expert should moisten the exact place of piercing with a woman's breast-milk. Then he should scratch the circuit of the pupil (*drstimandala*) with the tip of the probe (*śalākā*).⁴⁸⁶
- Without injuring, gently pushing the phlegm in the circuit of the pupil against the nose, he should remove it by means of sniffing (ucchingana).⁴⁸⁷
- Whether the humour is solid $(sty\bar{a}na)$ or liquid (cala), one should apply

⁽*asādhya*) (cf. 6.17.2 (**vulgate**) above). The three categories, treatable, untreatable and possibly mitigated are standard categories of triage.

⁴⁸³ 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 (**atha-1980**)). These characteristics are then read as conditions that preclude surgery; for the Nepalese recension, they are simply descriptions of the appearance of a cataract.

⁴⁸⁴ 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.

⁴⁸⁵ Palhaṇa remarked on 6.17.61ab (**vulgate**) that when the piercing is not correctly done, blood issues and there is no sound.

⁴⁸⁶ The anatomy of the eye is described in 6.1.14–16 (**vulgate**). The disks or *maṇḍala*s are the circuits or disks of the eye.

⁴⁸⁷ Palhaṇa described sniffing (*ucchingana*) at 6.19.8 (**vulgate**), clearly intending inward sniffing.

- sweating to the eye externally, with leaves (*bhanga*) that remove wind, after fixing the needle $(s\bar{u}c\bar{\iota})$ properly.⁴⁸⁸
- 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.
- Now the pupil (drsti) shines like the sun (hari) in a cloudless sky; then, when objects become visible, one may slowly remove the probe $(sal\bar{a}k\bar{a})$.
- 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.⁴⁹⁰
- At that time, he should not belch, cough, sneeze, spit or shiver. Afterwards there should be restrictions (yantrana) as in the case of someone who has drunk oil.⁴⁹¹
- 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.
- 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]

- When there is a misshapen eyeball (*vilocana*), the eye may fill because of the release of blood from a vein.⁴⁹²
 - 488 We interpret *bhaṅga* as leaves, following the usage elsewhere in this sthāna 4.32.9, 6.11.5 (**vulgate**) where *bhaṅga* means shoots (*pallava*). A similar procedure is described at 6.17.25a (**atha-1980**), where sweating of the eye is done by means of the leaves of a castor-oil plant.
 - 489 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.
 - 490 Dalhaṇa explained disturbances specifically as dust, smoke, drafts and sunlight 6.17.67 (vulgate).
 - 491 Þalhaṇa 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 (**vulgate**)). These restrictions are also described at 6.18.28 (**vulgate**) and 1.16.25cd (**kunt-1939**).
 - 492 The condition of "misshapen eye" is referred to briefly in 6.61.9 (**vulgate**), where Dalhana glossed it as "bent brow and eye (*vakrabhrūnetra*)." The vulgate's reading of "with blood (*śonitena*)" is easier to construe.

A hard probe leads to shooting pain $(s\bar{u}la)$, a thin to unsteadiness of the humours (dosapariplava),⁴⁹³

- 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*).⁴⁹⁴
- 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 (*śātak-umbhī*).⁴⁹⁵

[Complications]

Redness, swelling, lumps, driness (coṣa), bubbling (budbuda), 496 pigs' eye ($s\bar{u}kar\bar{a}kṣit\bar{a}$), 497, irritation (adhimantha), etc. and other diseases arise from faults in the piercing,

- 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 (sariva), panic grass (darva), 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*).⁴⁹⁸ This is immediately beneficial when someone is looking for relief.

⁴⁹³ There is a medically significant difference here from the vulgate, which reads "a rough (*khara*) probe" not a "thin" probe.

⁴⁹⁴ This translation of loss of function (*kriyāsaṅga*) is given on the basis of Dalhaṇa's gloss of *kriyāsaṅgakarin* at 3.8.19 (**vulgate**) as "causing the destruction of actions such as moving (*gamanādikriyāvināśakarī*)."

⁴⁹⁵ The vulgate reads "copper (tāmra)" in place of "silver."

⁴⁹⁶ Dalhana glossed "bubbling (budbuda)" as "prolapse (māṃsanirgama) that looks like bubbles."

⁴⁹⁷ The expression "pigs' eye" appears to be a *hapax*. It was glossed as "downward vision (*adhodṛṣṭitva*)" by Dalhaṇa.

⁴⁹⁸ On the adverbial use of gently (*mṛdu*), see **gomb-1979**.

- 72 A paste with Holostemma (payasyā),⁴⁹⁹ Indian sarsaparilla (śārivā), cassia cinnamon (patra), Indian madder (mañjiṣṭhā), and liquorice (madhukair) stirred with goat's milk, pleasantly warmed, is said to be healthy.⁵⁰⁰
- 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.
- 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.
- Having cooked it with liquorice, water-lily, and costus, mixed with grapes $(dr\bar{a}ks\bar{a})$, lac $(l\bar{a}ks\bar{a})$, white sugar $(sit\bar{a})$, with wild asparagus, Hare Foot Uraria $(prthakparn\bar{i})$, 501 nutgrass $(must\bar{a})$, 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. This has an admixture of cottony jujube $(k\bar{a}kol\bar{\iota})$ etc., should be prescribed in all treatments. 503
- 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.⁵⁰⁴
- 78cd–80ab Now listen to two excellent collyriums for making the pupils clear. After grinding the flowers of perploca of the woods (meṣaśṛṅga),

⁴⁹⁹ The identity of *payasyā* is debated (**gvdb**), and was already in doubt at the time of Dalhaṇa but likely candidates may be those suggested by Dalhaṇa, 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**).

⁵⁰⁰ The expression "stirred with goat's milk ($aj\bar{a}k\bar{s}\bar{\imath}r\bar{a}rdita$)" is difficult. It may be connected with the rare root ard documented by **whit-root**. Cf. $\sqrt{ard\ gatau}$ ($Dh\bar{a}tup\bar{a}tha\ 1.56$).

⁵⁰¹ **suve-2000**.

⁵⁰² Dalhaṇa mentioned that these drugs include Deodar (*bhadradāru*) and other wind-destroying drugs. The *vātasaṃśamana* group is listed in *Suśrutasaṃhitā sūtrasthāna* 1.39.7.

⁵⁰³ Dalhana noted that this would include errhines, ointments, etc.

⁵⁰⁴ The vulgate reads *vāpi* for *cāpi*, so Dalhaṇa saw blood-letting and cautery as alternatives, not a sequence of treatments. Dalhaṇa listed the places that cauterization may be applied, such as the brow, forehead, etc.

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.

- Having made it into wicks (vartti), the physician should apply it 8ocd-81 as a collyrium. Alternatively, one should make kohl (srotoja), coral or a dual? (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 *Kriyākalpa* section. Those various methods may be applied here too.

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 (nidāna), 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. (tiva-1990) dedicated a monograph to this topic, and selb-2005; selb-2005b has explored gyencological narratives in ayurveda.

Placement of the Chapter

In the vulgate text (**vulgate**) the current chapter, 6.38, is found after the Uttaratantra's subsection on paediatrics, the *Kumāratantra*, see Table 3.505 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*.

⁵⁰⁵ Or Kumārabhṛtya as this section is named in MS Kathmandu KL 699.

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

Table 3: Subdivisions of the Uttaratantra, in the vulgate.

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). Dalhaṇa 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 "*yoni*" in the statement "born in the womb (*yoni*) of animal and human" [in 6.37.13bc (**vulgate**)] and because (2) the disorders of the female reproductive system are the causes for the inborn disorders of children.⁵⁰⁶

- In the placement of the Nepalese version,
 - 6. Yonivyāpatpratiṣedha is preceded by

⁵⁰⁶ Dalhaṇa on 6.38.1 (vulgate): ग्रहोत्पत्त्यध्यायानन्तरं 'तिर्यग्योनिं मानुषं च' इति वचनेन योनेर्नाम-संकीर्तनात् कुमारजन्मविकारकारणत्वाञ्च योनेर्व्यापञ्चिकित्सितार्थं योनिव्यापत्प्रतिषेधाध्यायारम्भो युज्यत [...]।

Parallels 153

- 6.56 Mūtrāghātapratiṣedha (6.58 in **vulgate**) and
- 6.57 Mūtrakṛcchrapratiṣedha (6.59 in vulgate), 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 Dalhaṇa, and instead highlight the importance of curing female diseases for the satisfaction of male partner.

- SS.1.3 in both **vulgate** and the Nepalese version lists the chapter at the place where it is found in the vulgate.⁵⁰⁷
- Parallel chapters in the Aṣṭāṅgasaṃgraha and the Aṣṭāṅgahṛdayasaṃhitā form a part of the Śalyatantra section of each text.

Parallels

The current chapter is parallel in its content to *Aṣṭāṅgasaṃgraha* 6.38 and 6.39 as well as *Aṣṭāṅgahṛdayasaṃhitā* 6.33 and 6.34 (*Guhyarogavijñāna* and *Guhyarogapratiṣedha* respectively).

A close literary parallel to the first part of the chapter is found in *Mād-havanidāna* (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.⁵⁰⁸

Another most interesting parallel is found in *Carakasaṃhitā* 6(Ci).30.

⁵⁰⁷ See 1.3.37ab (**vulgate**): नैगमेषचिकित्सा च ग्रहोत्पत्तिः सयोनिजा ॥. 508 **meul-1974**.

Philological notes

Metrical alterations

The original opening verses

From verse *Suśrutasaṃhitā* 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).⁵¹⁰ By contrast, the vulgate contains two complete verses (four hemistichs) in the *anuṣṭubh* metre, again with only loosely-related content.⁵¹¹ The three final hemistichs of this group are borrowed verbatim from the *Carakasaṃhitā*.⁵¹² 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* (rogasaṃgraha)".⁵¹³ This statement does not make any sense in the context of the *Suśrutasaṃhitā*, where no such Compendium exists.⁵¹⁴ By contrast, in the *Carakasaṃhitā* this reference points back to chapter 1.19 (**cara-trikamji3**), which calls itself "The Compendium of Diseases".⁵¹⁵ This Compendium lists all the diseases dealt with in later sections of the text, and specifically mentions the twenty diseases of female reproductive system.⁵¹⁶ Even the vocabulary and wording of this passage

⁵⁰⁹ Suśrutasaṃhitā 6.38.3–4ab (**vulgate**).

⁵¹⁰ The metre of these verses is not perfect.

⁵¹¹ *Suśrutasaṃhitā* 6.38.4cd–6ab (**vulgate**).

⁵¹² Carakasaṃhitā 6.30.7cd–8 (cara-trikamji3).

⁵¹³ Suśrutasaṃhitā 6.38.5ab (vulgate): विंशतिर्व्यापदो योनेर्निर्दिष्टा रोगसंग्रहे ॥ ← Carakasaṃhitā 6.30.7cd (cara-trikamji3).

⁵¹⁴ The remark was not commented on by Dalhana.

⁵¹⁵ Carakasaṃhitā 1.19.9cd (cara-trikamji3): रोगाध्याये प्रकाशिताः.

⁵¹⁶ Carakasaṃhitā 1.19.3 (cara-trikamji3): विंशतिर्योनिव्यापदः।

is identical to the later verses. It is beyond doubt that this passage originated in the $Carakasamhit\bar{a}$ and was borrowed by the editors of the vulgate text of the $Su\acute{s}rutasamhit\bar{a}$. 517

⁵¹⁷ 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 *Suśrutasaṃhitā*, it is likely that **madhava** 62.1–2ab too was borrowed from from the *Suśrutasaṃhitā* and not from its original location in the *Carakasaṃhitā*).

- 1 And now I shall explain the countermeasures against disorders of the female reproductive system (*yonivyāpat*).⁵¹⁸
- *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 (*yoni*), because he is entirely devoted to it (that is, to curing these diseases) for the sake of (people's) happiness.⁵¹⁹
- *4 A corrupted female reproductive system (yoni) cannot consume semen $(b\bar{\imath}ja)$, and therefore, the woman cannot take a fetus (that is, become pregnant). She gets severe prolapses $(ar\acute{s}as)$, abdominal lump (gulma) and similarly many other diseases (roga).
- *5 Humours (doṣa), wind $(v\bar{a}ta)$, etc., corrupted due to faulty medical treatment $(mithyopac\bar{a}ra)$, sexual activity, fate, and also defects (doṣa) of menstrual blood $(\bar{a}rtava)$ and semen $(b\bar{\imath}ja)$, produce various diseases in the female reproductive organ (yoni). These 20 diseases are taught here distinctly and one by one along with their treatment

⁵¹⁸ On this broad understanding of the term *yoni* as "female reproductive system" see Das 2003: pp. 572–5.

⁵¹⁹ 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.'

⁵²⁰ 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- $\sqrt{चर}$ is attested several times in medical literature. At least once, at Carakasaṃhitā 3.3.38 (cara-trikamji3), it is given an explicit gloss by Cakrapāṇidatta: मि-थ्योपचरितानिति असम्यक् चिकित्सितान् "... given improper therapy". In the Suśrutasaṃhitā (vulgate), it is used once in a passage (6.18.30 (vulgate)) 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 (vulgate): 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 (vulgate) = Carakasaṃhitā 6.30.8 (cara-trikamji3) = madhava 62.1 reads मिथ्याचार "wrong conduct." All commentators (Cakrapāṇidatta on the Carakasamhitā, Śrīkanthadatta on the madhava, and Dalhana on the Suśrutasamhitā) explain that the wrong conduct stands here specifically for unwholesome diet. The parallel in *Aṣṭāṅgaḥṛdayasaṃhitā* 6.33.27 (**kunt-1939**) = *Aṣṭāṅgasaṅgraḥa* 6.38.34a (atha-1980) plainly reads दुष्तभोजन "corrupted food" instead.

(bheṣaja), causes (hetu) and signs (cihna).

- *6.1 Because of wind (*vāta*), female reproductive organ (*yoni*) 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 (*sramsanī*),
 - 4. Child-murderess (putraghnī), and also
 - 5. Bilious / Choleric (*pittalā*).
- *7.1 And because of phlegm (*kapha*) occur:
 - 1. Extremely Excited (atyānandā),
 - 2. Protuberant (karninī), 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 $(and\bar{i}n\bar{i})$,
 - 3. two Huge (mahatī),
 - 4. With a needle-like opening (sūcīvaktrā),
 - 5. Sarvātmikā (sarvātmikā).

Uttaratantra 65: Rules of Interpretation

Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.⁴⁵¹ Earlier explorations of this topic include dasg-1952; lele-1981; mejo-2000; nara-1949; ober-1967; scha-1993; sing-2003; muth-1976.

prei-2013 provided further references to the discussion of *yukti* in Buddhist literatures. **mane-2008** gave examples of the use of tantrayuktis in Buddhist commentarial literature.

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 *Suśruta Saṃhitā* 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 *Caraka Saṃhitā* 8.12 (cara-trikamji3) which introduce four additional *tantrayuktis*. However, the *tantrayuktis* remain undefined in the *Caraka Saṃhitā*.

The enumeration and definitions of the *tantrayukti*s in the *Suśruta Saṃhitā* closely parallel their treatment in the *Arthaśāstra*. For a sideby-side comparison of the *tantrayukti*s in the Suśruta Saṃhitā and the Arthaśāstra, please refer to Table 4.

Table 4: Tantrayuktis in $Su\acute{s}ruta~Saṃhit\bar{a}~(S)$ and $Artha\acute{s}\bar{a}stra~(A)$

Sequence	Terms	Definitions
(S) 1.	adhikaraṇa	तत्र यमर्थमधिकृत्योच्यते तदधिकरणम्।
(A) 1.	adhikaraṇa	यमर्थमधिकृत्योच्यते तदधिकरण।
(S) 2.	yoga	येन वाक्यं युज्यते स योगः।
(A) 3.	yoga	वाक्ययोजना योग।
(S) 3.	padārtha	योऽर्थोऽभिहितः सूत्रे पदे वा स पदार्थः। पदस्य पदयोः पदानां वा योऽर्थः स पदार्थः। अपरिमि- ताश्च पदार्थाः।
(A) 4.	padārtha	पदावधिकः पदार्थः।
(S) 4.	hetvartha	यदुक्तं साधनं भवति स हेत्वर्थः।
(A) 5.	hetvartha	हेतुरर्थसाधको हेत्वर्थः।
(S) 5.	uddeśa / samuddeśa	समासवचनं समुद्देशः।
(A) 6.	uddeśa	समासवाक्यमुद्देशः।
(S) 6.	nirdeśa	विस्तरवचनं निर्देशः।
(A) 7.	nirdeśa	व्यासवाक्यं निर्देशः।
(S) 7.	upadeśa	एवमित्युपदेशः।
(A) 8.	upadeśa	एवं वर्तितव्यमित्युपदेशः।
(S) 8.	apadeśa	अनेन कारणेनेत्यपदेशः।
(A) 9.	apadeśa	एवमसावाहेत्यपदेशः।
(S) 9.	pradeśa	प्रकृतस्यातिक्रान्तेन साधनं प्रदेशः।
(A) 11.	predeśa	वक्तव्येन साधनं प्रदेशः।
(S) 10.	atideśa	l
(A) 10.	atideśa	उक्तेन साधनमतिदेशः।
(S) 11.	apavarga	अभिप्रमृज्यापकर्षणमपवर्गः।
(Aa 22.	apavarga	अभिप्लुतव्यपकर्षणमपवर्गः ।
(S) 12.	vākyaśeṣa	येन पदेनानुक्तेन वाक्यं समाप्यते स वाक्य- शेषः।
(A) 17.	vākyaśeṣa	येन वाक्यं समाप्यते स वाक्यशेषः।
(S) (A) 12.	иратāпа	दृष्टेनादृष्टस्य साधनमुपमानम्।

Early Sources 159

Sequence	Terms	Definitions
(S) 13.	arthāpatti	यदकीर्तितमर्थादापद्यते सार्थापत्तिः।
(A) 13.	arthāpatti	यदनुक्तमर्थादापद्यते सार्थापत्तिः।
(S) 14.	viparyaya	यद्यस्य प्रातिलोम्यं तद्विपर्ययः।
(A) 16.	viparyaya	प्रतिलोमेन साधनं विपर्ययः।
(S) 15.	prasaṅga	प्रकरणान्तरेण समानः प्रसङ्गः।
(A) 15.	prasaṅga	प्रकरणान्तरेण समानोऽर्थः प्रसङ्गः।
(S) 16.	ekānta	यदवधारणेनोच्यते स एकान्तः।
(A) 26.	ekānta	सर्वत्रायत्तमेकान्तः।
(S) 17.	anekānta	क्वचित्तथा क्वचिदन्यथा सोऽनेकान्तः।
(A)		
(S) 18.	pūrvapakṣa	यस्तु निःसंशयमभिधीयते स पूर्वपक्षः। ⁴⁵²
(A) 24.	pūrvapakṣa	प्रतिषेद्धव्यं वाक्यं पूर्वपक्षः।
(S) 19.	nirṇaya	तस्योत्तरं निर्णयः।
(A) 25.	uttarapakṣa	निर्णयवाक्यमुत्तरपक्षः।
(S) 20.	anumata	परमतमप्रतिषिद्धमनुमतम् ।
(A)18.	anumata	परवाक्यमप्रतिषिद्धमनुमतम् ।
(S) 21.	vidhāna	प्रकरणानुपूर्व्यादभिहितं विधानम् ।
(A) 2.	vidhāna	शास्त्रस्य प्रकरणानुपूर्वी विधानम्।
(S) 22.	anāgatāpekṣaṇa	एवं वक्ष्यतीत्यनागतापेक्षणम्।
(A) 27.	anāgatāvekṣaṇa	पश्चादेवं विहितमित्यनागतावेक्षणम् ।
(S) 23.	atikrāntāpekṣaṇa	इत्युक्तमित्यतिक्रान्तापेक्षणम् ।
(A) 28.	atikrāntāvekṣaṇa	l
(S) 24.	saṃśaya	उभयहेतुनिदर्शनं संशयः।
(A) 14.	saṃśaya	उभयतो हेतुमानर्थः संशयः।
(S) 25.	vyākhyāna	तत्रातिशयोपवर्णनं व्याख्यानम् ।
(A) 19.	vyākhyāna	अतिशयवर्णना व्याख्यानम् ।
(S) 26.	svasaṃjñā	अन्यशास्त्रासामान्या स्वसंज्ञा।
(A) 23.	svasaṃjñā	परैरसमितः शब्दः स्वसंज्ञा।
(S) 27.	nirvacana	लोकप्रथितमुदाहरणं निर्वचनम्।

 $[\]overline{\text{452 This definition of } p\bar{u}rvapakṣa \text{ in the Nepalese version is problematic.}}$

Sequence	Terms	Definitions
(A) 20.	nirvacana	गुणतः शब्दनिष्पत्तिर्निर्वचनम्।
(S) 28.	nidarśana	दृष्टान्तव्यक्तिर्निदर्शनम् ।
(A) 21.	nidarśana	दृष्टान्तो दृष्टान्तयुक्तो निदर्शनम् ।
(S) 29.	niyoga	इदमेवेति नियोगः।
(A) 29.	niyoga	एवं नान्यथेति नियोगः।
(S) 30.	vikalpa	l
(A) 30.	vikalpa	अनेन वानेन वेति विकल्पः।
(S) 31.	samuccaya	l
(A) 31.	samuccaya	अनेन चानेन चेति समुच्चयः।
(S) 32.	ūhya	यदनिर्दिष्टं बुद्धिगम्यं तदूह्यम्।
(A)	ūhya	अनुक्तकरणमूह्यम् ।

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. In the Yuktidīpikā, these terms are referred to as tantraguṇa or tantrasampat. They are: (1) sūtropapatti (2) pramāṇopapatti (3) avayavopapatti (4) anyūnatā (5) saṃśayokti (6) nirṇayokti (7) uddeśa (8) nirdeśa (9) anukrama (10) samjñā and (11) upadeśa.

Terminology

Characteristics of the Manuscript Transmission

Translation

1 Now we shall explain the chapter called, "the enunciation of the logical methods of the system (*tantrayukti*)."

⁴⁵³ See **ober-1967** for a detailed discussion of the use of the *tantrayuktis* in the *Yuktidīpikā*.

⁴⁵⁴ सूत्रप्रमाणावयवोपपत्तिरन्यूनता संशयनिर्णयोक्तिः। उद्देशनिर्देशमनुक्रमश्च संज्ञोपदेशाविह तन्त्रसम्पत्॥

3 There are thirty-two logical methods of the system. They are as follows:

1.	topic (adhikaraṇa)	18.	objection (pūrvapakṣa)
2.	construing (yoga)	19.	determination (nirnaya)
3.	word meaning (padārtha)	20.	consent (anumata)
4.	premise (hetvartha)	21.	itemization (vidhāna)
5.	mention (samuddeśa)	22.	future reference
6.	description (nirdeśa)		(anāgatāpekṣaṇa)
7.	prescription (upadeśa)	23.	past reference
8.	statement of reason (apadeśa)		(atikrāntāpekṣaṇa)
9.	indication (pradeśa)	24.	doubt (saṃśaya)
10.	prediction (atideśa)	25.	explication (<i>vyākhyāna</i>)
11.	exception (apavarga)	26.	field-specific term
12.	ellipis (<i>vākyaśeṣa</i>)		(svasaṃjñā)
13.	implication (arthāpatti)	27.	interpretation (nirvacana)
14.	contraposition (viparyaya)	28.	illustration (<i>nidarśana</i>)
15.	recontextualization	29.	compulsion (niyoga)
	(prasaṅga)	30.	option (vikalpa)
16.	invariable statement (<i>ekānta</i>)	31.	aggregation (samuccaya)
17.	variable statement (anekānta)	32.	deducible (ūhya)

- 4 It is said about this, "what is the purpose of these methods?" The answer is, "construing sentences and construing meanings". 455
- 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.

8 Among them, "topic (*adhikaraṇa*)" refers to the object, with reference to which statements are made, such as flavour (*rasa*) or humour (*doṣa*).⁴⁵⁶

⁴⁵⁵ Dalhaṇa on 6.65.4 (**vulgate**) explained "construing a sentence" as "connecting up a sentence that is not connected," and "construing a meaning" as "clarifying or making appropriate a meaning that is implied or inppropriate."

⁴⁵⁶ 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

9 "Construing (*yoga*)" is that by which a sentence is construed, 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, 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.⁴⁵⁷ Unifying the meanings of words in this way, even though they are far apart, is construing.

- The meaning that is conveyed in an aphorism $(s\bar{u}tra)$ or a word is called word-meaning $(pad\bar{a}rtha)$. In other words, word-meaning is the meaning of one or more words. Word-meanings are unlimited.
 - Where two or three meanings such as 'fat,' 'sweat' or 'anointment' appear to be possible, the valid meaning is the one that construes with prior and subsequent elements. 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. Taking note of the prior and subsequent elements, the two roots *vind* "find" and *vid* "know" have a single meaning. 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.
- The sense of the cause (hetvartha) is a statement that is a premiss ($s\bar{a}d-hana$). For example, just as a lump of earth is moistened by water, so a

⁴⁵⁷ 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.

⁴⁵⁸ There is a dangling relative clause, यो ऽर्थः, in the Nepalese version that is avoided in the vulgate recension by the addition of स ग्रहीतव्यः.

⁴⁵⁹ 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 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 $\sqrt{\text{vind}}$ or $\sqrt{\text{vid}}$? 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 ayurveda, specifically. This same issue is also addressed by Palhaṇa at 1.1.1 (**vulgate**).

wound is moistened by substances like milk with green gram. 460°

- 12 A mention (samuddeśa) is a brief statement such as "spike (śalya)".461
- 13 A description (*nirdeśa*) is a detailed statement. For example, "in the body or exogenous".⁴⁶²
- "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.
- "Statement of reason (*apadeśa*)" refers to statements like "this happens because of this." For example, in the sentence "Sweet substances increase phlegm," the reason is stated.⁴⁶³
- 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.
- Substantiation of the subject matter through a future event is "prediction (*atideśa*)." For example, if his wind moves upwards, that will cause him to have colic."⁴⁶⁴
- 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.
- 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.

See also Dalhaṇa at 1.1.1 (vulgate)

⁴⁶⁰ 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, हेल्वर्थ 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 <code>Aṣṭādhyāyī</code> (<code>Kaumudī</code> on 2.3.23). The vulgate of the <code>Suśrutasaṃhitā</code> rewrites the principle, making it clearer that the principle means "clarification by analogy." Cf. also Cakrapāṇi's discussion at Si.12.41 (<code>cara-trikamji3</code>), where he explained the principle as using an explanation from one situation to clarify another situation. Cf. <code>Arthaśāstra 5.1.13</code> (<code>oliv-2013</code>), which is also unclear.

⁴⁶¹ Generally, शल्य refers to any painful foreign body embedded in the flesh that requires surgical removal.

⁴⁶² This is a reference to 1.26.4 (**vulgate**) where **যাল্য** is described in more detail as being of two kinds.

⁴⁶³ A techical term also in Nyāyaśāstra (**jhal-1978**).

⁴⁶⁴ A techical term also in Nyāyaśāstra (**jhal-1978**).

- 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.
- 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."
- Recontextualization (*prasanga*) refers to a concept common to another section. For example, a concept belonging to another section is brought up by mentioning it repeatedly throughout.
- Invariable statement ($ek\bar{a}nta$) is one that is stated with certainty. For example, turpeth causes purgation; emetic nut induces vomiting.
- 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.
- A first point of view ($p\bar{u}rvapak$;a) is something stated with certainty. For example, how are the four types of diabetes caused by wind incurable?
- 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 (*anumata*) 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.
- 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 (atikrāntāpekṣaṇa) such as when one says in the Cikitsāsthāna, "As mentioned in the Sūtrasthāna..."

See chapter 40 of Sūtrasthāna.

vasā / medas / maj-

⁴⁶⁵ 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 ससंशयम् अभिधीयते स पूर्वपक्षः, but our manuscripts are unanimous in their reading.

An indication pointing to causes on both sides is doubt (*saṃśaya*). For example, a blow to ⁴⁶⁶ is fatal, whereas cutting hands and feet is not fatal.

- 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.
- Field-specific term ($svasamj\tilde{n}\bar{a}$) 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.

Does bhūtādi a compound or it means ahaṅkāra or ego?

- A customary potrayal is interpretation (*nirvacana*). For example, one goes along the shade fearing heat.
- 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.
- 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 partridge. 467
- A summarized statement is aggregation (*samuccaya*).⁴⁶⁸ For example, let there be rice with meat broth, rice with milk, or burley with ghee.

A meaningful reading of these two rules would be

- 39 idam vedam veti vikalpah / yathā rasodanah kṣīrodanah saghṛtā vā yavāgūr bhavatv iti //
- 38 saṃkṣepavacanaṃ samuccayaḥ / yathā māṃsavarge eṇahariṇalāvatittirāḥ pradhānā iti
- What is not explicitly stated but can be understood through discernment is deducible ($\bar{u}hya$). 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,

⁴⁶⁶ বলম্বেয is one of the muscle-group of lethal points mentioned in 3.6.7 (vulgate).

⁴⁶⁷ The example here matches समुच्चय (next text), not विकल्प. There seems to have been a metathesis of terms. susr-trikamji1945 notes that this text and the next have been swapped in the Calcutta edition that includes Hārāṇacandra's commentary bhat-1910, in the same way as in the Nepalese version.

⁴⁶⁸ As stated in the previous footnote, the example here is of विकल्प, not समुच्चय.

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 "Twofold is popular".

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- aconite leaf (?) (*viṣapatrikā*) Unknown. Cf. perhaps, *vatsanābha* (wolfsbane). Cf. **gvdb**: 103
- amaranth (taṇḍulīyaka) Amaranthus hypochondriacus, L. See King 321, NK, potter. Cf. avs: 96
- arjun (*arjuna*) Terminalia arjuna, Bedd. See HK: 34
- axlewood (*dhava*) Anogeissus latifolia (Roxb. ex DC.) Wall. ex Guill & Perr. See avs, chopra: 34, 118
- bamboo leaves (*veṇupatrikā*) Bambusa bambos, Druce. See **NK**: 96
- barley (*yava*) Hordeum vulgare, L. See HK: 77
- beautyberry (*priyaṅgu*) → *śyāmā*. Callicarpa macrophylla, Vahl. See **avs**, **NK**. Some say also Setaria italica Beauv. **gvdb**. See also **gvdb**: 34, 114, 119
- beautyberry (*śyāmā*) Callicarpa macrophylla, Vahl. See **avs**, **NK**: 72, 94, 96
- beggarweed (aṃśumatī) Desmodium gangeticum (L.) DC (**dymock**, **meul-plants1**, **NK**; **adps**, 414 and **avs**, 4.366 are confusing): 114
- beggarweed (*vidārigandhā*) → *śālaparṇī*.

 Desmodium gangeticum (L.) DC. See **dymock**, **meul-plants1**, cf. **NK**; **adps** and **avs**, 4.366 are confusing: 43, 77

 Bengal quince (*bilva*) Aegle marmelos (L.)

- Corr. See avs, Chevallier 159, NK, (moni-sans): 68, 70, 74
- bitumen (adrija) $\rightarrow \acute{sil} \ddot{a}jit$. A tar-like, black, resinous rock exudate. See **josi-maha**: 128
- black creeper ($p\bar{a}lind\bar{\imath}$) Ichnocarpus frutescens, (L.) R.Br. or Cryptolepis buchanani, Roemer & Schultes. See **avs**, **NK**, **adps**. Dalhaṇa on SS 5.1.82 identified $p\bar{a}lind\bar{\imath}$ with trivrt (turpeth) and **gvdb** supported this as a usual identification: 96, 99, 113, 114
- black pepper (*marica*) Piper nigrum, L. See adps, NK: 77
- blackboard tree (*saptachada*) Alstonia scholaris R. Br. **gvdb**: 95
- blackbuck (*hariṇa*) Antilope cervicapra, L. See **bia IW**: 99
- blue water-lily (*utpala*) Nymphaea stellata, Willd. See meul-plants1, IGP 790; dutt-1922, NK: 25, 94, 113, 114
- bulrush (*kaśeru*) "Two species, Scirpus kysoor Roxb., and S. grossus Linn. f. are used" **gvdb**. Also kaśeruka and kaseru: 72, 73, 76
- cardamom ($el\bar{a}$) Elettaria cardamomum, Maton. See **avs**, **NK**, **potter**: 68, 114, 119
- cassia cinnamon (*patra*) Cinnamomum tamala, (Buch.-Ham.) Nees. See **avs**, **NK**: 68, 74, 96, 114
- castor oil tree (gandharvahasta) $\rightarrow eraṇḍa$. **gvdb**, **imp**: 39, 70

- castor-oil (*eraṇḍa*) Ricinus communis, L. See **NK**, **chopra**: 44
- certain minerals (tārāvitāra) Unknown. It is not even certain that these are minerals. The variant reading in the vulgate, tāraḥ sutāraḥ was glossed by Palhaṇa on 5.3.14 (vulgate) as follows tāro rūpyaṃ, sutāraḥ pāradaḥ, "tāra means silver; sutāra means mercury.": 118
- 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): 26, 211
- chebulic myrobalan (*harītakī*) Terminalia chebula Retz. **gvdb**: 75, 95
- cherry (*elavālu*) Prunus cerasus, L.?. See BVDB 58, **NK**, **gvdb**: 114
- chital deer (*pṛṣata*) Axis axis, Erxleben. See **bia**, **IW**: 99
- citron (*mātuluṅga*) Citrus medica, Linn. **gvdb**. Also spelled *mātuliṅga*, *mātulaṅga*, *mātulaṅga*; 74, 79, 80
- cobra's saffron (*nāgapuṣpa*) → nāgakeśara. Mesua ferrea, L. See **NK**, **gvdb**: 114
- corky coral tree (*pāribhadra*) Erythrina suberosa Roxb. See **gvdb** 245: 118
- costus (*kuṣṭha*) Saussurea costus, Clarke. See **NK**: 68, 74, 96, 114, 119
- cottony jujube (*kākolī*) Ziziphus mauritanica, Lam. See **IGP**, **NK**; **IGP** 1233. Cf. **NK**: 67, 73, 74
- country mallow (atibalā) Abutilon indicum, (L.) Sweet, but may be other kinds of mallow, e.g., Sida rhombifolia, L.. See NK, IGP, NK, adps: 43, 73, 76, 162
- 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 fruitescens R. Rr. (**gvdb**): 43, 103, 113, 114, 118

- crape jasmine (nata) \rightarrow crape jasmine **gvdb**: 206, 208
- 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: 68, 74, 96, 114, 206, 208
- crimson trumpet-flower tree ($p\bar{a}$ tal \bar{a})
 Stereospermum chelonides, (L. f.) A.
 DC. See meul-plants1, avs, adps, avs,
 IGP 1120, dymock: 118
- cuscus grass (*uśīra*) Andropogon murcatus, Retz. Also "vetiver grass." See **NK**: 96
- datura (*dhattūra*) Datura metel, L. See **avs** (cf. *Abhidhānamañjarī*), **NK**, **potter**, **adps**: 40
- deodar (*bhadradāru*) Cedrus deodara, (Roxb.ex D.Don) G. Don. See **avs** 41, **NK**: 34, 72, 77, 114
- deodar (*devadāru*) Cedrus deodara (Roxb.) Loud. **gvdb**: 74, 162
- dried ginger (śuṇṭhī) Zingiber officinale, Roscoe. See adps, NK, avs, IGP: 72
- 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**): 25
- drum-giver (?) (*lambaradā*) Unknown; cf. **gvdb**: 103
- elixir salve ($ras\bar{a}\tilde{n}jana$) $\rightarrow a\tilde{n}jana$. See Indian barberry: 34, 44
- embelia (*viḍaṅga*) Embelia ribes, Burm. f. See **adps**, **avs**, **NK**, **potter**: 34, 68, 114
- emblic (*āmalaka*) Phyllanthus emblica, L. See **avs**: 75, 76
- emetic nut (karaghāṭa) Probably a synonym

for *karahāṭa* (emetic nut), q.v., **gvdb**: 207

- 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.: 207, 209
- emetic nut (*madana*) Randia dumetorum, Lamk. See **NK**: 94, 164
- false daisy (*subhaṅgurā*) (su)bhaṅgura = bhṛṅga? Eclipta prostrata (L.) L. See **gvdb**: 102
- fermented rice-water ($dh\bar{a}ny\bar{a}mla$) $\rightarrow k\bar{a}\tilde{n}j\bar{i}$, $k\bar{a}\tilde{n}jik\bar{a}$, $sauv\bar{i}ra$. **gvdb**, **NK**: 41, 42
- fern (*ajaruhā*) Nephrodium species **gvdb**, uncertain. Perhbaps Christella dentata(Forssk.) Brownsey & Jermy, which is reported to have folk applications against skin diseases in India: 98
- fire-flame bush (*dhātakī*) Woodfordia fruticosa (L.) Kurz. See **avs**, **NK**: 95 flax (*atasī*) Linum usitatissimum, L. See **NK**#1495: 73
- fragrant lotus (saugandhika) A type of kumuda or utpala (**gvdb**): 25
- garjan oil tree (aśvakarṇa) Dipterocarpus turbinatus Gaertn. f. See **gvdb**, **chopra**: 118
- giant potato $(k\bar{s}\bar{\imath}ravid\bar{a}r\bar{\imath})$ possibly \rightarrow $k\bar{s}\bar{\imath}ra\acute{s}ukla$. Ipmoea mauritiana, Jacq. See adps, avs, avs: 73, 208, 210, 211
- ginger (*mahauṣadha*) Zingiber officinale, Roscoe. See **adps**, **NK**, **IGP**: 99
- gold (hema) gold: 114
- gold and sarsaparilla (*surendragopa*)
 Unknown. Þalhaṇa on 5.3.15 (**vulgate**)
 glossed *surendra* as "gold" and *gopā* as
 "Indian sarsaparilla." He also noted
 other opinions that *surendra* was
 "Tellicherry bark": 118
- golden shower tree (*rājadruma*) rājadruma = āragvadha. Cassia fistula L. See **gvdb** 37: 118

golden shower tree (*āragvadha*) Cassia fistula L. See **gvdb** 37:75

- gourd (alābu) Lagenaria siceraria Standl. **gvdb**. Some say Lagenaria vulgaris, Seringe (**NK**) but this is not appropriate for blood-letting: 21, 22, 95
- green gram (*māṣa*) Vigna radiata (L.) R. Wilcz. See **adps**, **IGP** 1204: 34, 73, 163
- hare foot uraria (*pṛśnipaṛṇī*) → sahā? Uraria lagopoides, DC. See **meul-plants1**, **dymock**, **avs**, **NK**; **adps**, **avs** and **avs** are confusing: 72, 73
- heart-leaf sida ($bal\bar{a}$) Sida cordifolia, Linn. See **adps**, **NK**: 43, 73, 76, 78, 114, 162
- heart-leaved moonseed (*amṛtavalli*) See heart-leaved moonseed (*amṛtā*): 162
- heart-leaved moonseed (amṛtā) → guḍūcī. Tinospora cordifolia, (Willd.) Hook.f. & Thoms.? See adps, NK, Dastur #229: 96, 112, 207
- heart-leaved moonseed (guḍūcī) Tinospora cordifolia (Willd.) Miers. gvdb, NK: 74
- heart-leaved moonseed (somavallī)
 Tinospora cordifolia (Thunb.) Miers.
 gvdb. Likely, but uncertain: 96
- henna (*madayantikā*) Lawsonia inermis, L. See **avs**, **NK**, **potter**: 97
- Himalayan mayapple (*vakra*)
 Podophyllum emodi, Wall. (**NK**). But perhaps a synonm of crape jasmine and crape jasmine (**gvdb**): 119
- Himalayan monkshood (ativiṣā) → viṣā Aconitum heterophyllum Wall. **gvdb**, **NK**. Also "atis roots": 65, 97, 99, 119
- Himalayan monkshood $(vi s\bar{a}) \rightarrow ativi s\bar{a}$ **gvdb**: 210
- hogweed (*punarnavā*) Boerhaavia diffusa, L. See **adps**, **avs**, **NK**: 75, 97, 113
- Holostemma creeper (*jīvantī*) → sūryavallī? Holostemma ada-kodien, Schultes. See **adps**, **avs**, **NK**: 76, 210
- 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: 81, 99
 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 avs: 74, 208, 211
- hornwort (*jalaśūka*) → *jalanīlikā*.

 Ceratophyllum demersum, L. See **avs**, **IGP**. **gvdb** suggest horned pondweed.

 Dalhaṇa noted on 1.16.19 (**vulgate**) that some people interpret it as a poisonous, hairy, air-breathing, underwater creature: 43
- horseradish tree (*śigru*) Moringa oleifera Lam. See **IGP** 759, **meul-plants1**, **dymock**: 74, 75
- Indian barberry (añjana) → rasāñjana, dāruharidrā. Berberis aristata, DC. dymock, NK, meul-plants1, IGP: 44, 98, 207
- Indian barberry (*dāruharidrā*) Berberis aristata, DC. See **dymock**, **NK**, **meul-plants1**, **IGP** 141: 113, 114
- Indian barberry (kālīyaka) → dāruharidrā, añjana. Berberis aristata, DC. See dymock, NK, meul-plants1, IGP: 96
- Indian beech (*naktamāla*) Pongamia pinnata, (L.) Pierre. See **avs**, **NK**: 34, 70
- Indian ipecac (payasyā) Uncertain.

 Possibly Tylophora indica (Burm.f.)

 Merr. Perhaps a synonym of panacea
 twiner, giant potato, purple roscoea,
 and plants like asthma plant and Gulf
 sandmat (gvdb). Also "curds" when
 not a plant: 43, 74, 210
- Indian kudzu (*vidārī*) → *payasyā*. Pueraria tuberosa (Willd.) DC. See **adps**, **avs**, **avs**; not **dymock**. See **meul-plants2**, **avs**, but **avs** = Ipmoea mauritiana, Jacq: 43
- Indian madder (mañjiṣṭhā) Rubia

- cordifolia, L. See **IGP**, **chopra**, **gvdb**: 39, 114
- 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): 23
- Indian mustard (sarṣapa) Brassica juncea, Czern. & Coss. See avs, NK: 26
- Indian sarsaparilla (*sārivā*) → *anantā*. Hemidesmus indicus, (L.) R. Br. **adps**, **avs**–5, **NK**; and black creeper, pālindī. Ichnocarpus frutescens, (L.) R.Br. or Cryptolepis buchanani, Roemer & Schultes **avs**, 3.145, 3.203, **NK**, **adps**: 113, 114, 207
- Indian snakeroot (*sarpagandhā*) Rauvolfia serpentina, (L.) Benth. ex Kurz. See **NK**, **adps**, **gvdb**; cf. SS 5.5.76–78: 211
- Indrajao (*vṛkṣaka*) → *indrayava*, *indrabīja*, *kaliṅga*, and *kuṭaja*. Holarrhena antidysenterica Wall. **gvdb**: 162
- jambul (jambū) Syzygium cumini, (L.) Skeels. See adps, NK, potter, wuja-2003b: 95
- jasmine ($m\bar{a}lat\bar{t}$) Jasminium grandiflorum, L. See **NK**: 96
- jequirity (*guñjā*) Abrus precatorius, L. See **avs**, **NK**, **potter**: 102, 103
- (?) (*karaṭā*) Not in **gvdb**. Cf. perhaps *karahāṭa* (emetic nut) : 103
- lac (lākṣā) Kerria lacca (Kerr.). See meul-plants1, NK. watt-comm is characteristically informative, and is definite about the antiquity of lac in India: 119
- leadwort (*citraka*) Plumbago zeylanica (or indica?), L. See RĀ. 6.124, **adps**, **NK**:

34, 65, 70, 80 liquorice (?) (klītaka) Glycyrrhiza glabra, L.? gvdb discuss the many difficulties in identifying this plant: 102 liquorice (madhuka) see yaṣṭīmadhuka: 43, 72-77, 79, 99, 112, 114 liquorice (yastīmadhuka) Glycyrrhiza glabra, L. avs, NK, gvdb: 44 lodh tree (lodhra) Symplocos racemosa, Roxb. See meul-plants1, adps, NK. gvdb notes that there are two varieties, S. racemosa, qualified as śāvara, and S. crataegoides Buch.-Ham. for pattikā lodhra: 34, 114 long pepper (māgadha) Piper longum, L. See **NK**; but cf. **avs**: 98 long pepper (pippalī) Piper longum, L. See adps, NK: 70, 75, 79–81, 99, 114, 162 lotus stalk (mṛṇāla) "Leaf stalk of sacred lotus" gvdb: 74 luffa ($kos\bar{\imath}tak\bar{\imath}$) = $kos\bar{\imath}tak\bar{\imath}$. Luffa cylindrica, (L.) M. J. Roem. or L. acutangula, (L.) Roxb. adps, NK, gvdb: 95, 112, 209 luffa gourd ($kośavat\bar{\imath}$) = $koṣ\bar{\imath}tak\bar{\imath}$, luffa : 112 maidenhair fern (hamsāhvayā) Adiantum lunaluatum Burm f. gvdb: 162 mango (āmra) Mangifera indica Linn. gvdb: 95 marking-nut tree (aruṣkara) Semecarpus anacardium L. See bhallātaka (marking-nut tree): 103 marking-nut tree (bhallātaka) Semecarpus anacarium, L. See NK, avs: 70, 98, 209 medhshingi (vijayā2) Dolichandrone falcata (DC.) The Sauśrutanighantu gives a number of synonyms for vijayā (**suve-2000**). But one of them, *viṣāṇī* (also *meṣaśṛṅgī*), is sometimes equated with *Dolichandrone falcata (DC.)* Seemann (adpsgvdb, a plant used as an abortifacient and fish poison (NK): 103 migraine tree (agnimantha) Premna

corymbosa, Rottl. See avs 1927, adps,

NK, avs; meul-plants1: = P.

integrifolia/serratifolia, L: 112

milk-white (kṣīraśuklā) An unidentified plant. gvdb: see purple roscoea and giant potato: 43, 211 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: 99 monitor lizard (godhā) Varanus bengalensis, Schneider. See dani-1983: mung beans (mudga) Phaseolus radiatus L. gvdb: 73, 76, 144 mung beans (māṣaka) Phaseolus mungo Linn. **gvdb**: 96 myrobalan (abhayā) Terminalia chebula, Retz. See adps, NK, potter: 65, 112, 119 natron (suvarcikā) Sodium carbonate. NK. Dalhana identifies suvarcikā with svarjikṣāra 4.8.50 (vulgate): 80, 114 neem tree (nimba) Azadirachta indica A. Juss. gvdb: 40, 162 nutgrass (kuruvinda) Unknown. Dalhana on 5.3.15 (vulgate) 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, sastika dhānya: 118 nutgrass (*mustā*) Cyperus rotundus, L. See adps, avs, NK: 210 panacea twiner $(arkapusp\bar{\imath}) \rightarrow arkaparn\bar{\imath}$, 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 annus Linn., but this plant is native to the Americas: 113, 208 peas (harenu) harenu = satīna. Pisum

sativum, L. gvdb notes that two plants

are usually meant under this name, but

there is no agreement on the identity of

peepul tree (aśvattha) Ficus religiosa, L. See **adps**: 121 periploca of the woods (*mesaśrnga*) Gymnema sylvestre (Retz.) R. Br. See avs, NK: 98 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): 208 plumed cockscomb (*indīvara*) Uncertain; possibly Celosia argentea Linn. But see the useful discussion in gvdb. Possibly another name for thorn apple (*karambha*), q.v.: 212 pointed gourd (patola) Trichosanthes dioica, Roxb. **gvdb**: 74, 112 poison berry (brhatī) Solanum violaceum, Ortega. See adps, NK, avs: 70, 75, 113, 114 poison-altar (?) (viṣavedikā) Unknown. Possibly, at a guess, visamustika (strychnine tree)? **gvdb** Or *viṣā* (Himalayan monkshood): 103 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: 114 pondweed (śevāla) Zannichellia palustris L. See horned pondweed: 25 prickly chaff-flower (apāmārga) Achyranthes aspera, L. See meul-plants1, avs, adps, avs, dymock: 39, 43, 73 purging nut (*mūṣikā*) Jatropha curcas, L. See avs, NK: 98 purple calotropis (arka) Calotropis gigantea, (L.) R. Br. See adps, avs, NK, potter, chop-1958: 34, 43, 70 purple roscoea (ksīrakākolī) **gvdb** notes that many physicians use Roscoea procera Wall. in this context. But the

identification is uncertain. Possibly

the second: 74, 113, 114, 119

connected to milk-white or giant potato: 73, 208, 210 radish (mūlaka) Raphanus sativus, L. See NK: 77, 78 rajmahal hemp $(morața) \rightarrow m\bar{u}rv\bar{\iota}$, Marsdenia tenacissima (Roxb.) Wight et Arn. Good discussion at gvdb: 112 red chalk (gairika) gairika: 114 red gourd (bimbī) Coccinia indica, W. & A. See PVS 1994.4.715; NK: 95 rice grains (tandula) Oriza sativa, Linn. Same as unhusked rice (\hat{sali}) gvdb; or just "grains": 26 rice-grain chaff (śālitandulakāndana) See chaff: 26 rock salt (saindhava) See NK, watt-comm: 26,80 rosha grass (dhyāmaka) Cymbopogon martinii (Roxb.) Wats. See avs, NK: 114 sacred grass (kuśa) Desmostachya bipinnata, Stapf. See avs, Kew: 73 sacred lotus (kamala) Nelumbo nucifera Gaertn. gvdb: 209 sacred lotus (padma) Nelumbo nucifera, Gaertn. See **NK**: 25, 74, 96 sage-leaved alangium (ankolla) Alangium salvifolium (Linn. f.) Wang. gvdb: 95 sandalwood (candana) Santalum album, L. See adps, NK: 74, 76, 114 sappanwood (pattānga) Also pattanga. Caesalpinia sappan, L. avs, imp, gvdb: scarlet mallow (bandhujīva) Pentapetes phoenicea, L. NK, gvdb: 97 scented pavonia (bālaka) Pavonia odorata, Willd. See adps, NK: 114 scutch grass (dūrvā) Cynodon dactylon (Linn.) Pers. (gvdb): 208 selu plum (śelu) Cordia myxa, L. non Forssk. See meul-plants1 (2), IGP, cf. avs; cf. avs (C. dichotoma, Forst.f.), NK (C. latifolia, Roxb.): 75, 112 sesame oil (taila) Sesamum indicum L.

gvdb: 43

- siris (\dot{sir} iṣa) Albizia lebbeck, Benth. See avs, NK: 112
- siris seeds (*śirīṣamāṣaka*) Albizia lebbeck, Benth. See **avs**, **NK**: 95
- small-flowered crape myrtle (*sidhraka*) Lagerstroemia parviflora Roxb. See **gvdb**: 118
- snakeroot (sugandhā) → sarpagandhā
 Rauvolfia serpentina Benth. ex. Kurz.
 See Indian snakeroot. But may be
 Aristolochia indica Linn. Has been
 identified with ??, or ??. See (gvdb):
 102
- spikenard (*māṃsī*) Nardostachys grandiflora, DC. See **NK**: 114
- spikenard (nalada) \rightarrow māṃsī. Nardostachys grandiflora, DC. See **NK**:
- strychnine tree (*viṣamuṣṭika*) Strychnos nux vomica Linn. **gvdb**: 210
- sugar ($sit\bar{a}$) Dalhaṇa makes this equation at 1.37.25 (**vulgate**): 114
- sugar (*śarkara*) Saccharum officinarum, Linn. **NK**: 99
- sugar cane (*ikṣu*) Saccharum officinarum, Linn. **NK**: 99
- sunflower $(s\bar{u}ryavall\bar{\iota}) \rightarrow \bar{a}dityavall\bar{\iota},$ $s\bar{u}ryamukh\bar{\iota}$, Helianthus annūs Linn. gvdb: 112
- sweet flag (*vacā*) Acorus calamus Linn. See **gvdb**: 73, 80
- sweet plants (*madhuravarga*) The sweet plants are enumerated at *Suśrutasaṃhitā* 1.42.11. See also **gvdb**: 43
- sweet-scented oleander (aśvamāraka) Nerium oleander, L. See adps, NK: 102
- Tellicherry bark (*kuṭaja*) Holarrhena pubescens Wall. ex G.Don, with Wrightia tinctoria and W. arborea considered **gvdb**, **adps**: 70, 207
- thorn apple (*karambha*) Datura metel, L. See **gvdb** for useful discussion. Also, **avs** (cf. Abhidhānamañjarī), **NK**, **potter**, **adps**. Possibly the same plant as

- plumed cockscomb (*indīvara*) (**gvdb**): 103, 210
- 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: 113
- three-leaved caper (varuṇa) Crataeva magna (Lour.) DC. See **avs**; cf. **NK** : 98
- top layer of fermented liquor (surāmaṇḍa) imp, NK, mchu-2021: 41, 42
- 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: 40, 212
- tree cotton (*picu*) See tree cotton (*kārpāsa*):
- turmeric (*gaurī*) Curcuma longa, L. See **adps**, **avs**, **NK**: 74
- turmeric (*haridrā*) Curcuma longa Linn. **gvdb**: 75, 113, 119
- turmeric (*rajanī*) Curcuma longa, L. **adps**, **avs**, **NK**: 26, 114
- turpeth (*trivṛt*) → *tṛvrtā*. Operculina turpethum (Linn.) Silva Manso = Ipmoea turpethum R. Br. **gvdb**.: 68, 99, 164, 205
- unhusked rice (śāli) Oriza sativa, Linn. **gvdb**: 26, 211
- velvet-leaf (*pāṭhā*) Cissampelos pariera, L. See **adps**, **NK**, **meul-plants1**, **avs**; cf. **avs**: 34, 65, 80, 112
- velvet-mite (*indragopa*) Kerria lacca (Kerr.). **lien-1978**: 94
- verbena (*phañjī*) Clerodendrum serratum, L. See **avs**, **adps**: 97
- watered buttermilk (*udaśvit*) **moni-sans**: 95
- weaver's beam tree (*muṣkaka*) Schrebera swietenioides, Roxb. See **avs**, Lord, **NK**: 70, 118
- white babool (*arimeda*) Acacia leucophloea, (Roxb.) Willd. See **avs**: 34

white calotropis (alarka) Calotropis procera, (Ait.) R. Br. See NK, chopra, chop-1958: 43 white clitoria ($\acute{s}vet\bar{a}$) $\rightarrow giry\bar{a}hv\bar{a}$. Clitoria ternatea, L. See avs, NK: 96 white cutch tree (somavalka) Acacia polyacantha, Willd. See avs, IGP 7, meul-plants1, avs; pace NK: 97, 118 white dammer tree (sarja) Vateria indica, L. See NK, avs, avs, chopra: 34 white siris (kiṇihī) Albizia procera, (Roxb.) Benth. See gvdb 98, NK: 113 white teak $(k\bar{a}\acute{s}mar\bar{\iota}) \rightarrow madhuparn\bar{\iota}$. Gmelina arborea, Roxb. See meul-plants1, bole-1986, adps: 74, 76 white water-lily (kumuda) Nymphaea alba, Linn. gvdb: 25 wild asparagus ($bahuputr\bar{a}$) \rightarrow nandana? Asparagus racemosus, Willd. See

further wild asparagus (śatāvarī): 97

racemosus, Willd. See adps, avs, NK,

wild asparagus (śatāvarī) Asparagus

- IGP, avs, dymock: 72-74, 76, 144, 213 wild celery (agnika) \rightarrow may be $bhal\bar{a}taka$, lāngalī, ajamodā, moraţa, or agnimantha, gvdb. Uncertain: 112 wild celery (ajamodā) Apium graveolens, L.: 112 Withania (aśvagandhā) Withania somnifera (L.) Dunal. See avs, dymock., Chevallier 150: 43, 69, 75 wolfsbane (vatsanābha) Aconitum napellus, L. See avs, NK, potter. Or Aconitum chasmanthum Stapf ex Holmes, gvdb: 205 wood apple (kapittha) Limonia acidissima, L. See avs, NK: 75, 96, 98 woodrose (mūṣikakarnī) Jatopha curcas, L. avs, NK. gvdbadps discuss this issue well: 96, 97
- yellow-berried nightshade (kṣudrā) Solanum virginianum, L. See adps, NK, avs: 113, 114

Glossary

'angry beetles' (toṭaka): 116	agramukta (free from the point): 146
'bellied' (kukṣita): 117	āhāra (diet): 13
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(any better medical terms for them?)	50
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(Not in vulgate)	-

(I am looking for a better translation)
(I'd need to rework on it)
(I'd need to rework on it and think about the sequencing of the
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(Not happy with it)
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