A Translation of the New Edition of the Suśrutasamhitā

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Contents

The manuscripts and editions used in the vulgate editions	by
Yādavaśarman Trivikrama Ācārya	4
The sources of the 1915 edition	. 4
The sources of the 1931 edition	. 4
The sources of the 1938 edition	. 5
Evaluation	
The 1939 edition	
For the Bhānumatī	
For the Suśrutasaṃhitā	. 7
Evaluation	
Features of the manuscript transmission	10
Palaeographical features	. 10
Chart of characters	
Sūtrasthāna, adhyāya 1	11
Sūtrasthāna, adhyāya 2	18
Literature	. 18
Sūtrasthāna, adhyāya 16	19
Sūtrasthāna, adhyāya 28	27
Kalpasthāna, adhyāya 1	28
Literature	. 28
Manuscript notes	. 29
Translation	. 30
[Threats to the king]	. 30
Kalpasthāna, adhyāya 2	39
Întroduction	
Translation	
The effects of poisons	
Symptoms of tuber poisoning	
Slow-acting poison	
The stages of toxic shock	

Remedies for the stages of slow poisoning	49
The 'invincible' ghee	51
Curing the 'slow-acting' poison	51
Kalpasthāna, adhyāya 3	52
Introduction	52
Translation	52
Uttaratantra, adhyāya 16 (17 in the vulgate)	5 4
Literature	54
Translation	54
[Complications]	63
[Characteristics of the probe]	63
[Complications]	63
Uttaratantra, adhyāya 38	66
Editions and Abbreviations	78
Botanical Reference Works	81
Index of Manuscripts	82
References	82
Glossary	98
Glossary of Medical Substances	120
On digital critical editions	123

The manuscripts and editions used in the vulgate editions by Yādavaśarman Trivikrama Ācārya

Yādavaśarman Trivikrama Ācārya produced three successive editions of the *Su-śrutasaṃhitā* with the commentary of Dalhaṇa, in 1915, 1931 and 1938. These editions, especially the last, are generally considered the most scholarly and reliable editions of the work, and have been constantly reprinted up to the present day.¹

The 1915 edition was based on three manuscripts. The 1931 edition used another seven plust two printed editions. For his final 1938 edition, Ācārya used a further three manuscripts.² These sources are described as follow, with an overview in Table 1.

The sources of the 1915 edition

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

The sources of the 1931 edition

- 1 Vārāṇasī, professor of literature, the great Gaurīnāthapāṭhaka. With the *Nibandhasaṅgraha*. Covers the *nidānasthāna* and *uttaratantra*.
- 2 Ahmedabad. My friend Sva. Vā. Vaidya Raṇachoḍalāla Motīlālaśarman. With the *Nibandhasaṅgraha*. Covers the śārīrasthāna.
- 3 From the personal library of my great friend Sva. Vā. Vaidya Murārajīśarman. Extremely old. No commentary. Covers the *śārīrasthāna*.
- 4 Pune, BORI library. With the *Nibandhasangraha*. Covers the śārīrasthāna.³
- 5 Puṇe, BORI library. With the *Nibandhasaṅgraha*. Complete. With some damaged folia.

¹ See also the study of these editions by Klebanov (2021 a: §1.2) and Wujastyk (2013: 143–144).

The following account of the sources is paraphrased from Y. T. Ācārya and N. R. Ācārya's own account of his sources (Su 1938: 22).

Not one of the three MSS of the śārīrasthāna described in H. D. Sharma 1939.

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

The sources of the 1938 edition

- 1 Gwalior, from the library of my great friend Pam. Rāmeśvaraśāstrin Śukla. Covers the *sūtra*, *nidāna*, *śārīra*, *cikitsā and kalpasthānas*.
- 2 Bikaner, from the library of the Royal Palace, supplied by Paṃ. Candraśekharaśāstrin. Contains the commentary *Nyāyacandrikāpañjikāvyākhyā* by Gayadāsa. Covers the *nidānasthāna*. This is almost certainly MS Bikaner Anup 4390.⁷
- 3 Kathmandu, located in the private library of the Royal Guru Hemarāja Śarman. An extremely old palm-leaf manuscript. Readings from this MS were compiled by Paṃ Nityānandaśarman Jośī and sent to Ācārya. Covers from the beginning of the work to the end of the ninth chapter of the *cikitsāsthāna*. The siglum for this manuscript in footnotes was ता for ताल्पत्रपुरतके.

Evaluation

Estimates show that there are approximately 230 extant manuscript witnesses for the *Suśrutasaṃhitā*.⁸ Many of these manuscripts cover only one or more or

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

⁵ Bhaṭṭācārya 1910-7.

⁶ Sena et al. 1886–93.

See Dominik Wujastyk, "MS Bīkāner AnupLib 4390." Pandit. http://panditproject.org/entity/108068/manuscript.

This figure is arrived at by summing the MSS mentioned in NCC and in the NGMCP. The real figure could be many scores higher.

Manuscripts (●) and print editions (○)															
edition		1915		1931					1938						
sthāna	1	2	3	1	2	3	4	5	6	7	8	9	1	2	3
sū.	•							•	?		0	o(1-43)	•		•
ni.	•			•					?		0		•	•	•
śā.	•								?		0		•		•
ci.									?	•	0		•		● ⁽¹⁻⁹⁾
ka.	•								?		0		•		
utt.			•						?		0				

Table 1: The sources of Yādavaśarman T. Ācārya's three vulgate editions.

its chapters. Nevertheless, this is an order of magnitude more evidence than was considered by Ācārya for his vulgate editions.

While the descriptions provided by Ācārya of his source materials seems at first to be moderately comprehensive, Table 1 reveals the real paucity of textual basis for these editions. Apparently, fifteen manuscripts were consulted. However, we quickly find that two of the sources were other people's printed editions, and one of those covered less than a quarter of the work. That reduces the manuscript base to 13 manuscripts. Acarya does not appear to have seen two of the manuscripts at all, having been sent collations prepared for him by others (7 of 1931 and 3 of 1938). Thus, Ācārya's final edition was based on the personal consultation of eleven manuscripts. One of them, no. 6 of 1931, remains mysterious. Only a single manuscript covers the whole of the Suśrutasamhitā, no. 5 of the 1931 edition. Manuscript 1 of 1938 is the next most complete, but it omits the uttaratantra, which comprises a third of the work. Manuscript 1 of the 1915 edition is next, but it still omits both of the longest chapters, and thus offers less than half the work. For the rest, the evidence is spotty, with each part of the work being supported by only between four and eight manuscripts, excluding the printed editions.

Two sources stand out for their historical importance. The first is no. 3 of 1931, which $\bar{A}c\bar{a}rya$ calls "extremely old." It covered the $s\bar{a}r\bar{i}rasth\bar{a}na$ only, and unfortunately we know nothing of the later history of this manuscript. The second is no. 3 of 1938, which is one of the important Nepalese manuscripts being considered in the present project. $\bar{A}c\bar{a}rya$'s remarks and references to Hemarājasarman's introduction to the $K\bar{a}syapasamhit\bar{a}$ allow us to identify this man-

uscript as MS Kathmandu NAK 5-333.⁹ But that manuscript covers the whole work, not just up to the ninth chapter of the *cikitsāsthāna* as Y. T. Ācārya and N. R. Ācārya stated.¹⁰ Perhaps the editors only received collations for this portion of the manuscript and did not know that it was a witness for the whole work.

The 1939 edition

In 1939, Yādavaśarman Trivikrama Ācārya and Nandakiśora Śarman co-edited an edition of the *sūtrasthāna* of the *Suśrutasaṃhitā* that was published by the Swami Laxmi Ram ayurvedic centre in Jaipur, and printed at the famous Nirṇayasāgara Press in Mumbai. ¹¹ The text was edited on the basis of the following sources.

For the Bhanumatī

- 1. A printed edition. Covered the *Bhānumatī* up to chapter Su.sū.40. The siglum was 貝 for *mudrita*.¹²
- 2. A manuscript in the India Office Library library provided through the Bhandarkar Oriental Research Institute in Pune. 13 This manuscript covered the Bhānumatī b up to the end of the sūtrasthāna. The siglum was ह for हस्तिस्रित. 14

For the Suśrutasamhitā

1. A palm leaf manuscript from Hemarājaśarman's personal library. 15 The siglum was না for নাভ্যন্ন.

⁹ Su 1938: 22; Hemarāja Śarman 1938: 56–57. Discussed by Klebanov (2021*a*: §1.1, 2.3). See also HIML: IIB, 25–41; Wujastyk 2003: 161–169.

¹⁰ Su 1938: 22.

Su 1939. The description of the sources below is based on Yādavaśarman T. Ācārya's remarks in his introduction (pp. 3–4). See also the remarks on this edition by Klebanov (2021*b*: 7). On the Swami Laxmi Ram centre, see Hofer 2007

¹² Sena et al. 1886–93. The manuscript on which this edition was based is probably in the library of the Calcutta Sanskrit College, and described in H. Sastri and Gui 1895–1917: v. X.1, which is not available to me. See also HIML: IB, 495, n. 57 for mention of this manuscript. The reference at Rama Rao et al. 2005: 217 to CSCL accession number 97 in Bengali script may be this manuscript.

¹³ At this time, manuscripts from Britain were routinely lent to scholars in India and vice versa.

¹⁴ MS London BL H. T. Colebrooke 908 (PanditProject #109978, consulted on July 03, 2021).

¹⁵ I.e., MS Kathmandu NAK 5-333.



Figure 1: A page of the 1939 $Bh\bar{a}numat\bar{\imath}$ edition, showing the variant readings in the footnotes.

- 2. His own published edition. The siglum was ड for डल्हणसंमतः पाठः. 16
- 3. Hārāṇacandra Cakravarti's published edition with his own commentary.¹⁷ The siglum was हा.

Evaluation

The main innovation of this publication was to present the only surviving part of the commentary on the *Suśrutasaṃhitā* by the great eleventh-century medical scholar Cakrapāṇidatta, namely the *Bhānumatī*. A secondary purpose was to present the text of the *sūtrasthāna* as read in MS Kathmandu NAK 5-333, that had recently been brought to the editors' attention. In their judgement, the Kathmandu manuscript presented a text that was closer to what Cakrapāṇidatta had before him than the text according to Dalhaṇa. This was the first *Suśrutasaṃhitā* edition in which Ācārya used sigla to identify the sources from which variant readings were reported, so while it has limitations, it for the first time enables us to get some idea of origins of the text (see Figure 1).

Ācārya noted in his introduction that the manuscripts containing the Palhaṇa's commentary all came together with the root-text of the *Suśrutasaṃhitā*, and thus the main *Suśrutasaṃhitā* text reflected the readings chosen by Palhaṇa. But the manuscripts of the *Bhānumatī* contained the commentary alone, without the root-text, and had many explanations based on different readings of the root-text than those of Palhaṇa. In many of these cases it was hard to know what the text that Cakrapāṇidatta had before him. But Ācārya noted that Cakrapāṇidatta had a text before him that had much in common with the text of the Nepalese manuscript.¹⁹

There is compelling evidence that Cakrapāṇidattas's *Bhānumatī* commentary once covered the whole text of the *Suśrutasaṃhitā*.²⁰ The loss of the rest of the work ranks amongst the greatest disasters in Āyurvedic literature. Remarkably, the whole *Bhānumatī* may still have existed in the early twentieth century. In 1903, Palmyr Cordier reported being privately informed of a complete copy of the work in a personal manuscript collection in Benares.²¹

¹⁶ Su 1938. It is noteworthy that Ācārya refers to his 1938 edition as representing "the Þalhaṇa recension."

¹⁷ Bhaṭṭācārya 1910-7.

¹⁸ HIML: IA, 374-375 and IB, 495-496.

¹⁹ Su 1939: 3–4. See discussion by Klebanov (2021*b*: 7).

²⁰ HIML: IA, 375.

²¹ Cordier 1903: 332.

Features of the manuscript transmission

Palaeographical features

- śrita for śṛta.
- ś and s in KL 699.

Chart of characters

[[[Put a chart from QuickPalaeographer here.]]]

Sūtrasthāna, adhyāya 1

- 1 Now I shall narrate the chapter on the origin of this knowledge.²²
- 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.²³
- "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.²⁴
- 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.
- palhaṇa understood the word "knowledge (veda)" as specifically "medical knowledge." He said that the word "longevity" (āyur) had been elided. After this opening statement, later manuscripts and commentaries include the attribution, "as the venerable Dhanvantari stated." The absence of this statement in the early Nepalese manuscripts is highly significant because it removes the outer narrative frame of the Suśrutasamhitā (Wujastyk 2013: 148; Klebanov 2021a: § 3.1.2; Rai 2019; Birch, Wujastyk, Klebanov, Parameswaran, et al. 2021). On the figure of Dhanvatari in medical literature, see HIML: IA 358–361.
- 23 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 (Su 1931: 1), and was not included in HIML amongst "authorities mentioned in the *Suśrutasaṃhitā*." Meulenbeld gathered textual evidence about Bhoja at HIML: IA 690–691. Klebanov (2021*b*) has discussed these authors in the context of an anonymous commentary on the *Suśrutasaṃhitā* that cites them.
- 24 Svayambhū is another name for Brahmā, the creator.

- 8 "Now, a collection of the characteristics of each component of Āyurveda.
- "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 have been possessed by gods, their enemies, ²⁵ Gandharvas, Yakṣas, demons, deceased ancestors, Piśācas, Vināyakas, ²⁶ 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.²⁷
- "[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.
- 17 "Thus, this Āyurveda is taught with eight components."

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 *asura*s, probably under the influence of Dalhaṇa. Cite Paul Courtright, Ganesha book.

²⁷ 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 creepycrawlies ($sar\bar{t}srpa$) in the list, it does seem that MS K had a shorter list, and the vulgate edition adds rodents ($m\bar{u}sika$).

- "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 Āyurveda is eliminating the disease of one who have been assailed by disease and protecting the healthy; āyurveda is [that knowledge] in which they find a long life, or that by which long life is known. Learn its best component (i.e., surgery), which is being taught in accordance with tradition, perception, inference and analogy.
- "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.
- 26 "Brahmā said this, 'Prajāpati learned it. From him, the Aśvins. From the Aśvins, Indra. From Indra, I. In this world, I will transmit to those who desire it for the benefit of people.'
 - [There a verse about this.].²⁸

27

- For, I (i.e., Brahmā) am Dhanvantari, the first god, the remover of old age, pain and death of mortals.
 - Having understood surgery, the best of the great knowledge systems, I arrived on earth again to teach it here.
- In this context, as far as this discipline is concerned, a human being ($puru \not= a$) 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

²⁸ This is an expansion of the scribe's abbreviation *bha* for *bhavati cātra ślokaḥ* "There is a verse about this" (sometimes plural).

the moving. Its nature ($\bar{a}tmaka$) is twofold, depending on the preponderance of Agni and Soma.²⁹ 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".³⁰ Where they are concerned, the human being is the main thing; others are his support. Therefore, the human being (puruṣa) is the locus.

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.³¹

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 (*svābhāvika*) ones are hunger, thirst, old age, death, sleep and those of the temperament (*prakrti*).

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

Scarification (*lekhana*), nourishment (*bṛṃhaṇa*), purification (*saṃśodhana*), pacification (*saṃśamana*), diet (*āhāra*) and regimen (*ācāra*), 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 ($\bar{a}\dot{s}rayin$). And substances are remedies ($osadh\bar{\iota}$ -).³² There are two types: stationary ($sth\bar{a}vara$) and moving ($ja\dot{n}gama$).

Of these, there are four types of stationary ones: fruit trees (*vanaspati*), flowering trees (*vṛkṣa*), herbs (*oṣadhi*) and shrubs (*vīrudh*).³³ Amongst these,

²⁹ See Wujastyk 2004.

³⁰ This fourfold classification of beings is paralleled with closely-related vocabulary in *Bhela-saṃhitā* 4.4.4 (Bhela 2000: 206; Bhela 1921: 81).

³¹ Note that four humoral substances are assumed here.

Pāṇini 6.3.132 provides that the final vowel of the noun oṣadhi may be lengthened ($\to oṣadhi$) 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 oṣadhi. This form is in fact not uncommon in medical literature as well as in epics, purānas, smrtis, and other parts of Sanskrit literature.

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 "fruit trees" have fruit but no flowers.³⁴ The "flowering trees" have flowers and fruit. The "herbs" die when the fruit is ripe. "Shrubs" put out shoots.
- As is well known, moving remedies are also of four types: those born in in a caul (*jarāyuja*), those born from eggs (*aṇḍaja*), those born of sweat (*svedaja*), and shoots (*udbhid*). Amongst these, those born in a caul include animals (*paśu*), humans, and wild animals (*vyāla*). Birds, creepy-crawlies (*sarīṣrpa*) and snakes are "born of eggs." Worms (*kṛmi*), small insects (*kunta*) and ants (*pipīlika*) and others are born of sweat.³⁵ Shoots include red velvet mites (*indragopa*) and frogs (*maṇḍūka*).³⁶|
- In this context, among the stationary remedies, skin (*tvak*), leaves (*patra*), flowers (*puṣpa*), fruits (*phala*), roots (*mūla*), bulbs (*kanda*), sap (*kṣīra*), resin (*niryāsa*), essence (*sāra*), oil (*sneha*), and juice extract (*svarasa*)³⁷ are useful; among the moving remedies pelt (*carman*), hair, nails, and blood (*rudhira*) and so forth.
- 34 And earthen products (*pārthiva*) include gold and silver.³⁸
- The items created by time (*kālakṛta*) are clusters (*samplava*) as far as wind and no wind (*nivāta*), heat and shade, darkness and light and the cold, hot and rainy seasons (*varṣā*) are concerned. The divisions of time are the blink of the eye (*nimeṣa*), a trice (*kāṣṭhā*), minutes (*kalā*), three-quarters of an hour (*muhūrta*), a day and night (*ahorātra*), a fortnight (*pakṣa*), a month (*māsa*), a season (*ṛtu*), a half-year (*ayana*), a year (*saṃvatsara*), and yuga (*yuga*).³⁹
- 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:]40

The MSS agree in reading *phalavantyaḥ* "having flowers" which is grammatically non-standard. This form is also found in the *Viṣṇudharmottarapurāṇa* (1.92.27, 1.92.27 Viṣṇudh.: 56r).

³⁵ 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).

³⁶ On indragopa, see Lienhard 1978.

³⁷ On juice extract (*svarasa*) see CS 1.1.73, 1.4.7; Dalhana on 4.10.12 (Su 1938: 450).

³⁸ The flow of concepts in the treatise seems to be interrupted here.

³⁹ These units are presented at 1.6.5 (Su 1938: 24) and discussed by Hayashi (2017: § 59).

⁴⁰ See footnote 28.

- This fourfold category is taught by physicians as a cause for the agitation and quelling of bodily diseases.⁴¹
- There are two kinds of invasive diseases. Some certainly⁴² affect (ni√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 (osadhi),
 - 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 (*kriyā*)," therapies (*karman*) such as oiling and excision (*chedya*) are taught.
- From the mention of the word "time," every single teaching about the times for procedures is meant.

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

⁴² The text uses an archaic interjection here, ha.

[There is a verse about this:]43

- This seed of medicine has been declared in brief. Its explanation will be given in one hundred and twenty chapters.⁴⁴
- There are one hundred and twenty chapters in five sections (*adhyāya*).⁴⁵ 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.⁴⁶

[There is a verse about this:]⁴⁷

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.

⁴³ See footnote 28.

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

⁴⁵ On viṃśa in the sense of "greater by 20" see P.5.2.46 śadantaviṃśateś ca.

⁴⁶ 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 (susr-trikamji3) there is indeed a statement that picks up the point about there being 120 chapters.

⁴⁷ See footnote 28.

Sūtrasthāna, adhyāya 2

Literature

HIML: IA, 204; Preisendanz 2007; Wujastyk 2012: 82–83, et passim.

1

Sūtrasthāna, adhyāya 16

- 1 Now we shall expound the method for piercing the ear. 48
- One may pierce a child's ears for the purpose of preserving and decorating. On renowned days, half days, hours and constellations during the first half of the sixth or seventh lunar month, the physician should sit the boy, who has received a benediction (krtamangala) blessings pronounced ($svastiv\bar{a}cana$)⁴⁹ and is being pacified, on the lap of a wet-nurse.⁵⁰ Then, having pulled his ear with the left hand, he should use his right hand to pierce the ear straight through at a naturally occurring cleft.⁵¹ For a boy, do the right ear first; for a girl, do the left one. Use a needle on a thin ear; an awl ($\bar{a}r\bar{a}$) on a thick one.⁵²
- 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 Suśrutasaṃhitā, such as the Kaśāpyasaṃhitā (HIML: IIA, 30). Also, the instrument for piercing the ear is described in the Aṣṭāṅgahṛdayasaṃhitā 1.26.26 (Ah 1939: 153). In the versions of the text known to Dalhaṇa (Su 1938: 76) and Cakrapāṇidatta (Su 1939: 125), the heading of this chapter is karṇavyadhabandhavidhi ('the method of piercing and joining the ear'), instead of the Nepalese version's karṇavyadhavidhi. The topic of karṇabandha 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. For a discussion of the frame story in the Nepalese version, see Birch, Wujastyk, Klebanov, Parameswaran, et al. 2021. Dalhaṇa (Su 1938: 76) and Cakrapāṇidatta (Su 1939: 125) state that only the ears of healthy people should be pierced, and they quote Bhoja to affirm this: 'When piercing the ears of children who are free of disease at these times, their ear flaps and apertures, as well as limbs, increase' (for the Sanskrit, see Su 1938: 76).
- 49 The syntax here is unclear. The expression *svastivācana* may have been a gloss inserted into the text at an earlier period to clarify *maṅgala*. But as it stands, it is not syntactically connected to the rest of the sentence. In the versions of 1.16.3 known to Cakrapāṇidatta (Su 1939: 126) and Þalhaṇa (Su 1938: 76), the words are united in a compound that reads more naturally.
- The versions of 1.16.3 known to Cakrapāṇidatta (Su 1939: 126) and Dalhaṇa (Su 1938: 76) have the additional compound kumāradharānke ('on the lap of one who holds the child') after dhātryanke. The gender of kumāradhara is made clear by Dalhaṇa's gloss 'a man who holds the child'. Also, both versions add bālakrīḍanakaiḥ pralobhya ('having enticed with children's toys') to indicate that the child should be enticed with toys to stay on the assistant's lap. According to Dalhaṇa on 1.16.3 (Su 1938: 76), the toys include replica elephants, horses, bulls and parrots. Dalhaṇa further mentions that others read bhakṣyaviśeṣair vā ('or by special treats') before bālakrīḍanakaiḥ.
- The versions of 1.16.3 of Cakrapāṇidatta (Su 1939: 126) and Dalhaṇa (Su 1938: 76) add *ādityakarāvabhāsite* to clarify that this naturally occurring cleft is illuminated by sunshine.
- 52 Dalhana on 1.16.3 (Su 1938: 76) clarifies that the awl is a shoe-maker's knife for piercing leather.

- 3 If there is excess blood or pain one should know that it was pierced in the wrong place. The absence of side-effects is a sign that it has been pierced in the right place.⁵³
- 4 In this context, if an ignorant person accidentally pierces a duct (*sirā*) there will be fever, burning, swelling (*śvayathu*), pain, lumps (*granthi*), paralysis of the nape of the neck (*manyāstambhā*), convulsions (*apatānaka*), headache or sharp pain in the ear.⁵⁴
- Having removed the wick (*varti*) in the hole because of the aggravation of humours or a culpable piercing,⁵⁵ one should smear it with a paste of the roots of barley, liquorice, Indian madder (*mañjiṣṭhā*), and the castor oil tree (*gandharvahasta*), thickened with honey and ghee. When it has healed well, one should pierce it again.
- 6 One should treat the properly-pierced ear by sprinkling it with raw sesame oil. After every three days one should apply a thicker wick (*varti*) and sprinkle oil right on it.⁵⁶
- Once the ear is free from humours or side-effects, one should loosen it with a light dilator (*pravardhanaka*) in order to enlarge it.⁵⁷

- This passage is significantly augmented in 1.16.4 of Cakrapāṇidatta's version (Su 1939: 126) and 1.16.5 of Palhaṇa's (Su 1938: 77) to outline the specific problems caused by piercing three ducts called *kālikā*, *marmikā* and *lohitikā*. 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 (Su 1939: 126) cites several verses attributed to Bhoja on the problems caused by piercing these three ducts in the ear flap: 'Lohitikā, marmikā 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 *lohitikā*. Pain and lumps are thought to arise from piercing *marmikā*. Piercing *kālikā* gives rise to swelling, fever and burning.'
- In addition to these reasons, 1.16.6 of Dalhaṇa's (Su 1938: 77) adds *kliṣṭajihmāpraśastasūcīvy-adhāt* ('because of piercing with a painful, crooked and unrecommended needle') and *gāḍhataravartitvāt* ('because of a wick that is too thick'). Dalhaṇa was aware of the reading in the Nepalese version because he notes in his commentary on 1.16.6 (Su 1938: 77) that some read 'because of the accummulation of humours' rather than 'because of piercing with a painful, crooked and unrecommended needle or because of a wick that is too thick.' On the meaning of *samudāya*, see ?? and Meulenbeld 1992: 1–5 (ADD PRIMARY REF).
- The manuscripts support the reading $sth\bar{u}latar\bar{t}m$ that is either a non-standard form or a scribal error.
- Cakrapāṇidatta on 1.16.6 (Su 1939: 127) and Palhaṇa on 1.16.8 (Su 1938: 77) point out that the dilator can be made of wood, such as that of the prickly chaff flower (*apāmarga*), the neem tree (*nimba*) and the cotton plant (*kārpāsa*). Dalhana adds that it can also be made of lead

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 NAK 1-1079.

- 8 A person's ear enlarged in this way can split in two, either as a result of the humours⁵⁸ or a blow. Listen to me about the joins ($sandh\bar{a}na$) it can have.
- Here, there are, in brief, fifteen ways of mending the ear flap.⁵⁹ They are as follows: Rim-join (nemīsandhānakaḥ), Lotus-splittable (utpalabhedyaka), Dried Flesh (vallūraka), Fastening (āsaṅgima), Cheek-ear (gaṇḍakarṇa), Take away (āhārya), Ready-Split (nirvedhima), Multi-joins (vyāyojima), Doorhinge (kapāṭasandhika), Half door-hinge (ardhakapāṭasandhika), Compressed (saṃkṣipta), Reduced-ear (hīnakarṇa), Creeper-ear (vallīkarṇa), Stick-ear (yaṣṭīkarṇa), and Crow's lip (kākauṣṭha).⁶⁰

In this context, among these,

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

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

"Dried flesh" (vallūraka): both flaps are short, round, and equal.

"Fastening" (āsaṅgima): one flap is longer on the inside.

"Cheek-ear" (gaṇḍakarṇa): one flap is longer on the outside. 61

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

"Ready-split" (*nirvedhima*): the flaps are like a dais (*pītha*).

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

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

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

⁽sīsaka) and should have the shape of the datura flower (dhattūrapuṣpa).

Dalhaṇa on 1.16.9 (Su 1938: 77) notes that the word doṣa here can refer to either a humour, such as wind $(v\bar{a}ta)$, as we have understood it, or a disease generated from a humour.

⁵⁹ The Nepalese version uses the word *sandhāna* 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 Dalhana's version (Su 1938: 77) uses the term *bandha* here and at the very beginning of the chapter (i.e., 1.16.1) to introduce the topic of repairing the ear.

⁶⁰ For an artist's impression of these different kinds of joins in the ear flap, see Majno 1975: 290 (reproduced as Figure 3.2 in Wujastyk 2003: 154).

For an artist's impression of this join, see Majno 1975: 291 (reproduced as Figure 3.3 in Wujastyk 2003: 155).

These ten options (*vikalpa*) for joins (*sandhi*) 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 (*granthita*) flesh and the flaps are stretched thin and have stiff (*stabdha*) ducts (*sirā*). "Crow-lip" has a flap without flesh with compressed (*saṃkṣipta*) tips and little blood. Even when they are bound up, they do not heal because they are hot, inflamed, suppurating (*srāva*), or swollen. 4

A person wishing to perform any of these joins should therefore gather together the supplies prepared according to the recommendations of the 'Preparatory Supplies' chapter. And in particular, he should gather decanted liquor (surāmaṇḍa), milk, water, fermented rice-water (dhānyāmla), and powdered earthenware crockery (kapālacūrna).

Next, he should prepare the woman or man, who have had the ends of their hair tied up, have eaten lightly, and are firmly supported by qualified attendants.

Then, he should ready the bindings (bandha) and carry out the procedure with cutting (chedya), splitting (bhedya), scarification (lekhya), or piercing (vya-dhana). Then, he should examine the blood of the ear to know whether it is tainted (dusta) or not. If it is tainted by wind, the ear should be bathed with fermented rice-water (dhanyamla) and water; if tainted by choler, then cold water and milk should be used; if tainted by phlegm, then decanted liquor

⁶² Cakrapāṇidatta on 1.16.9–13 (Su 1939: 128–129) and Dalhaṇa on 1.16.10 (Su 1938: 77–78) provide examples of how the names of these joins describe their shapes. For example, the rim-join (nemīsandhānaka) is similar to the join of the rim of a wheel (cakradhārā).

⁶³ Dalhaṇa on 1.16.10 (Su 1938: 77–78) mentions that some do not read the statement that only five are incurable, and they understand the causes of unsuccessful joins given below (i.e., heat, inflammation, suppuration and swelling) as also pertaining to the first ten when they do heal.

⁶⁴ The version of 1.16.11–14 known to Dalhaṇa (Su 1938: 78) has four verses (śloka) 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. See the introduction for a discussion of this. [CROSS REF?]

⁶⁵ Suśrutasamhitā 1.5 (Su 1938: 18-23).

The term *kapālacūrṇa* is unusual. Palhaṇa (Su 1938: 79) defines it as the powder of fragments of fresh earthen pots and Cakrapānidatta (Su 1939: 129) as the powder of earthenware vessels.

($sur\bar{a}manda$) and water should be used, and then he should scarify it again. Then, arranging the join in the ear so that it is neither proud, depressed, nor uneven, one should make the join. Having seen that the blood has stopped, one should anoint it with honey and ghee, bandage each ear with cotton (picu) and gauze (prota), and bind it up with a thread, neither too tightly nor too loosely. Then, the earthenware powder should be sprinkled on, and medical advice ($\bar{a}c\bar{a}rika$) given. And he should supplement with food as taught in the 'Two Wound' chapter. ⁶⁷

- 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 (raktabaddha), unhealed and will peel. When tainted with choler, is becomes pinched (gāḍha), septic (pāka) and red. When tainted by phlegm, it will be stiff (stabdha) and itchy. It has excessively copious suppuration (srāva) and is sopha (puffed up). It has it has a small amount of wasted (kṣīṇa) flesh and it will not grow. 69
- 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.
- Now, massage for the healthy ear, in order to enlarge it.

 One should gather as much as one can the following: a monitor lizard (godhā⁷⁰), scavenging (pratuda) and seed-eating (viṣkira) birds, and creatures that live in marshes or water,⁷¹ fat, marrow, milk, and sesame oil, and white mustard oil.⁷² Then cook the oil with an admixture (prativāpa) of the

⁶⁷ Suśrutasaṃhitā 4.1 (Su 1938: 396-408).

^{68 1.16.17} of Þalhaṇa's version (Su 1938: 79) reads "impure" for the Nepalese "too pure," which would appear to make better medical sense. Emending the text to *nāśuddha*- for *nātiśuddha*- in the Nepalese recension would yield the same meaning as the Þalhaṇa's version.

⁶⁹ In his edition of *Suśrutasaṃhitā*, Ācārya (Su 1938: 79 n. 1) includes in parentheses the following treatment for these conditions, which according to a footnote is not found in the palm-leaf manuscript he used: 'One should sprinkle it with raw sesame oil for three days and one should renew the cotton bandage after three days' (āmatailena trirātraṃ pariṣecayet trirātrāc ca picuṃ parivartayet).

⁷⁰ Varanus bengalensis, Schneider (Daniel 1983:58)

⁷¹ For such classifications, see Zimmermann (1999) and Smith (1994).

^{72 1.16.19} of Þalhaṇa's version (Su 1938: 79) includes ghee (sarpis). However, Þalhaṇa's remarks on 1.16.19 and Cakrapāṇidatta's on 1.16.18 (Su 1939: 130) indicate that they knew a version of this recipe (perhaps, similar to the Nepalese) that does not have ghee. Þalhaṇa

following: purple calotropis ($arka^{73}$), white calotropis ($alarka^{74}$), country mallow ($bal\bar{a}^{75}$), 'strong Indian mallow' ($atibal\bar{a}^{76}$), country sarsaparilla ($anant\bar{a}^{77}$) beggarweed ($vid\bar{a}ri^{78}$), liquorice (madhuka), hornwort ($jalas\bar{u}ka \rightarrow jalan\bar{\imath}lik\bar{a}^{79}$), items having the 'sweet' savour ($madhuravarga^{80}$) and 'milk flower'($payasy\bar{a} \rightarrow vid\bar{a}r\bar{\imath}^{81}$). This should then be deposited in a well-protected spot.

- The wise man who has been sweated should rub the massaged (*mardita*) ear with it. Then it will be free of complications, and will enlarge properly and be strong.⁸²
- Ears which do not enlarge even when sweated and oiled, should be scarified at the edge of the hole ($ap\bar{a}nga$), but not outside it.⁸³
- In this tradition, experts know countless repairs to ears. So a physician who is very intent (*suniviṣṭa*) on working in this way may repair (*yojayed*) them. ⁸⁴

also notes that others simply read four oils, beginning with fat and without milk, whereas Cakrapāṇidatta says some read that it is made with four oils and milk.

- 73 Calotropis gigantea, (L.) R. Br. (ADPS 52, AVS 1.341, NK #427, Potter 57, ID 306)
- 74 Calotropis procera, (Ait.) R. Br. (NK #428, GIMP 46b, ID 306)
- 75 Sida cordifolia, L. (ADPS 71, NK #2297)
- 76 Abutilon indicum, (L.) Sweet; Sida rhombifolia, L.? (NK #11, IGP ,4 1080; NK #2300)
- 77 Hemidesmus indicus, (L.) R. Br. (ADPS 434, AVS 3.141-5, NK #1210)
- 78 Desmodium gangeticum (L.) DC (Dymock 1.428, GJM 602, cf. NK #1192; ADPS 382, 414 and IMP 2.319, 4.366 are confusing)
- Ceratophyllum demersum, L. (IMP 2371, AVS 2.56, IGP 232). This name is not certain. In fact, Dalhana on 1.16.19 (Su 1938: 79) notes that some people interpret it as a poisonous, hairy, air-breathing, underwater creature.
- 80 The items which exemplify the 'sweet' savour (madhuravarga) are enumerated at SS.1.42.11.
- 81 Pueraria tuberosa (Willd.) DC. (ADPS 510, IMP 1.792f., AVS 4.391; not Dymock 1.424f. See GJM supplement 444, 451, IMP 1.187, but IMP 3.1719 = Ipmoea mauritiana, Jacq.). The version of 1.16.19 known to Dalhaṇa (Su 1938: 79) adds several ingredients to this admixture, including apāmārga, aśvagandhā, kṣīraśuklā, madhuravarga and payasyā. Also, it has vidārigandhā instead of vidāri. When commenting on 1.16.19, Dalhaṇa (Su 1938: 79) notes that some do not read madhuravarga and payasyā. Therefore, there were probably other versions of this recipe with fewer ingredients, as seen in the Nepalese version.
- For these aims (i.e., healing and enlarging the ear), the text known to Dalhaṇa (Su 1938: 79) has an additional verse and a half describing an ointment for rubbing the ear (*udvartana*) and sesame oil (*taila*) cooked with various medicines for massage. Cakrapāṇidatta (Su 1939: 131) does 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.
- 83 Dalhaṇa's version of 1.16.23 adds another hemistich that states more explicitly that the scarification should not be done on the outside of hole as it will cause derangement.
- 84 After verse 17, the 1938 edition of Ācārya (Su 1938: 80) has in parentheses nineteen verses on diseases of the ear lobes, treatments and complications. It is possible that these verses were

- 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.⁸⁵
- Now I shall describe the proper method of repairing a severed nose. First, take from the trees a leaf the same size as the man's nose and hang it on him.
- Next, having cut a slice of flesh (*vadhra*)⁸⁶ with the same measurements off the cheek, the end of the nose is then scarified.⁸⁷ Then the undistracted (*apramatta*) physician, should quickly put it back together so that it is well joined (*sādhubaddha*).
- Having carefully observed that it has been well sown up, two tubes should be fixed in place.⁸⁸ Then, having lifted them up,⁸⁹ the powder of sappanwood ($patt\bar{a}nga^{90}$), liquorice ($yast\bar{l}madhuka^{91}$), and Indian barberry⁹² should be applied to it.

añjana

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 (Su 1939: 132) and Palhaṇa (Su 1938: 80) state 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 discussion of the disease *paripoṭa*. Palhaṇa goes on to say that some believe that these verses were not composed by sages and, therefore, do not read them.

- 85 The order of verses 17 and 18 are reversed in Dalhana's version (Su 1938: 80).
- 86 The version of 1.16.28b known to Dalhana (Su 1938: 81) 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 (see Wujastyk 2003: 67–70).
- 87 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 (Su 1938: 81) clarifies 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.
- Palhaṇa on 1.16.21 (Su 1938: 81) notes that the two tubes should be made of reed (*nala*) or the stalk of the leaf of castor oil plant (*eraṇḍapatranāla*). They should not be made of lead or betel nut because the weight will cause them to slip down.
- 89 The Sanskrit term *unnāmayitvā* in 1.16.21 is non-Pāninian.
- Gaesalpinia sappan, L. (AVS 1.323, IMP 2.847f.). For *pattāṅga* there are manuscript variants *pattrāṅga* (MS H) and *pattaṅga* (N). Also, MS K (f. 14r:1) has *pattrāṅga* in a verse in 1.14 (cf. 1.14.36, Su 1938: 66). In the text known to Dalhaṇa (Su 1938: 81), 1.16.29 has *pataṅga*, and this term is propagated in modern dictionaries.
- 91 Glycyrrhiza glabra, L. (AVS 3.84, NK #1136)
- 92 Berberis aristata, DC (Dymock 1.65, NK #685, GJM 562, IGP 141). Dalhana (Su 1938: 81) understands it as Elixir salve (rasāñjana).

- The wound should be covered properly with cotton (picu) and should be moistened repeatedly with sesame oil. Ghee should be given to the man to drink. His digestion being complete, he should be oiled and purged in accordance with the instructions specific to him.⁹³
- And once healed and really come together, what is left of that slice of flesh (vadhra) should then be trimmed. If it is reduced ($h\bar{\imath}na$), however, one should make an effort to stretch it, and one should make its overgrown flesh smooth.⁹⁴

⁹³ The expression *svayathopadeśa* is ungrammatical but supported in all available witnesses.

⁹⁴ Dalhana (Su 1938: 81) accepts a verse following this, which points out that the procedure for joining the nose is similar to that of joining the lips without fusing the ducts. He notes that earlier teachers did not think this statement on the nose and lips was made by sages, but includes it because it was accepted by Jejjata, Gayadāsa and others. However, Cakrapāṇidatta (Su 1939: 133) does not comment on this additional verse, which suggests that either he did not know of it or was not inclined to accept it.

Sūtrasthāna, adhyāya 28

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.⁹⁵

^{95 1.1.28 (}Su 1938: 7), tr. P. V. Sharma 1999–2001*b*: I, 21.

Kalpasthāna, adhyāya 1

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 follows: 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.⁹⁶

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.⁹⁷

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.⁹⁸ 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. Translations of this chapter since 2000 have appeared by Wujastyk (2003: 131-139), P. V. Sharma (1999–2001 b: 3, 1–15), and Srikantha Murthy (2000–2).

⁹⁶ Arthaśāstra 1.21.8 (Kangle 1969: 1, 30), translation by Olivelle (2013: 97).

⁹⁷ Cf. Arthaśāstra 1.21.6, ibid., Olivelle (2013: 96).

⁹⁸ Cf. Arthaśāstra 1.21.6 again.

⁹⁹ HIML: IA, 289-290.

¹⁰⁰ For a bibliography of translations to 2002, including Latin (1847), English (1877), Gujarati (1963) and Japanese (1971), see HIML: IB, 314–315.

More recently, a discussion of the fourth chapter of this section 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. 102

Manuscript notes

• MS Kathmandu NAK 5-333 has foliation letter numerals, for example on f. 323a, that are similar to MS Cambridge Add. 1693,¹⁰³ dated to 1165 CE noted in Bendall's chart of Nepalese letter-numerals Bendall 1883: Lithograph V, after p. 225

¹⁰¹ Harimoto 2011: 101–104.

¹⁰² The two editions that Harimoto noted, Su 1938 and Su 1889, present identical texts.

¹⁰³ 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. 104
 - 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.¹⁰⁵

[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. 106
 - 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. 107
- 8–11 He should employ a doctor in his kitchen (*mahānasa*) who is respected by experts, who belongs to a good family, is orthodox, sympathetic, not emaciated, and always busy.
 - 104 MS H adds in the margin अथ खल वत्स सुश्रुतः "Now begins Vatsa Suśruta." This phrase has been copied here by the scribe from the beginning of the Suśrutasamhitā chapter in the sūtrasthāna on the rules about food and drink (1.46.3 (Su 1938: 214)). The scribe presumably felt, not unreasonably, that this section had common subject matter with the present chapter. Further, SS 1.46.3 is the only place in the Nepalese transmission of the Suśrutasamhitā that names Dhanvantari and integrates him into the narrative of the Suśrutasamhitā 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 Klebanov (2021a: 28–32), who concludes that the earliest recoverable recension of the *Su-śrutasaṃhitā* may have had the phrase only at this point and not elsewhere in the work. See the further discussion by Birch, Wujastyk, Klebanov, Parameswaran, et al. (2021).
 - 105 This is a quite different statement from the vulgate which has Dhanvantari as the teacher, and calls him the Lord of Kāśī (kāśipati) (Su 1938: 559). Dalhaṇa followed the vulgate but explicitly noted the reading before us with small differences: दिवोदासः क्षितिपतिस्तपोधमेश्रुताकरः "Divodāsa, the king of the earth, was a mine of traditions about discipline and virtue."
 - 106 Verses about the use of Venemous Virgins as a weapon do not appear in the Nepalese manuscripts. Cf. Wujastyk 2003: 81 f., 132. This material is present in the commentary of Gayadāsa.
 - 107 The verb $\sqrt{\text{syas}}$ is conjugated as a first class root in the Nepalese manuscripts.

- The kitchen should be constructed at a recommended location and orientation. It should have a lot of light, ¹⁰⁸ have clean utensils and be staffed by men and women who have been vetted. ¹⁰⁹
- 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.¹¹⁰
- 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.
 - 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.¹¹¹ 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.
 - Flies or crows or other creatures that eat a poisonous morsel (*bali*) served from the king's portion, die on the spot.
 - 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

Cf. Arthaśāstra

¹⁰⁸ We read महच्छुचिः with the Nepalese manuscripts and against the vulgate's महच्छुचि. We understand श्रुचिस as a neuter noun meaning "light" following Apte (Apte: 1050a).

¹⁰⁹ Verses detailing the ideal staff are omitted in the Nepalese manuscripts. Cf. Su 1938: 560; Wujastyk 2003: 132.

¹¹⁰ 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 *Bodhāyanīyagṛhyasūtra* 2.10.54 (Shastri 1920: 68). More pertinently, perhaps, सूपोदन is attested in the Bower Manuscript, part II, leaf 11r, line 3 (Hoernle 1893–1912: vol. 1, p. 43).

¹¹¹ The word ध्याम is glossed by Dalhana (in a variant reading) as someone who is the colour of dirty clothes 5.1 (Su 1938: 560).

- changes its song and the common crane rises up excitedly.¹¹² 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.¹¹³ The chital deer sheds tears and the monkey releases excrement.¹¹⁴
- Vapour rising from tainted food gives rise to a pain in the heart, it makes the eyes roll, and it gives one a headache. 115
- 35, 36cd In such a case, an errhine and a collyrium that are costus, lāmajja grass ($l\bar{a}$ -majja), spikenard (nalada) and honey (madhus); ¹¹⁶ a paste of sandalwood on the heart may also provide relief. ¹¹⁷
 - 37 Held in the hand, it makes the hand burn, and the nails fall out. In such a case, the ointment (pralepa) is beautyberry (śyāmā), velvet-mite (indragopa), soma and water-lily (utpala).¹¹⁸
 - 38-39 If he eats that food, through inattention or by mistake, then his tongue will
 - 112 The verb अच्छीत "rises up" is a rare form best known from epic Sanskrit (see Oberlies 2003: 212, §7.6.1). The transmitted form कोञ्च is obviously a colloquial version of Sanskrit कौ-ञ्च. Commenting on 1.7.10 (Su 1938: 31), Dalhaṇa interestingly gives the colloquial versions of several Sanskrit bird names, even singling out pronunciation in the specific location of Kānyakubja. For कौञ्च he says that people pronounce it कुरञ्ज and कौचि. The form कोञ्च is found in Pāli (see Cone 2001: 731, who notes that Ardhamāgadhī has the same form). Elsewhere, Dalhaṇa calls the bird कौञ्चिर, कौञ्चि, and कैचर (1.46.105 (Su 1938: 223), 6.31.154 (Su 1938: 684) and (6.58.44 (Su 1938: 790) respectively).
 - 113 Dalhana seemed confused about the racket-tailed drongo (মূর্ন্বার). He called it a generic drongo (ম্বন্বার), a word that can also mean "bee," (Dave 1985: 62), and then said that it is like the black drongo (মূন্বার) (for a nice explanation of this name, see Dave 1985: 62–63) and that people call it "the king of birds."
 - 114 MS Kathmandu KL 699 reads "bull (वृषभ)" for "Chital deer (पृषत)." The latter may perhaps be mistaken for the former in the Newa script, although the reading of MS Kathmandu KL 699 is hard to read at this point.
 - "Tainted" translates उपिक्षित. The word's semantic field includes "to hurl, throw against," and especially "to insult verbally, insinuate, accuse." The commentator Palhana glossed the term as, "spoiled food given to be eaten" (विदूषितस्यान्नस्य भोकुं दत्तस्य), but he noted that some people read "उखाक्षित" or "thrown into a pan." Other translators have commonly translated it as "served," perhaps influenced by Palhana's "given (दत्त)."
 - 116 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.
 - 117 Singh and Chunekar (GVDB: 350) discussed the difficulties in identifying নামজ, 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 ময়ুस "sweetness" of the Nepalese manuscripts is less common than neuter ময় "honey, sweetness, liquorice."
 - 118 "Beautyberry" (*Callicarpa macrophylla* Vahl.) is one identification of **२**यामा, but vaidyas and commentators have different ideas about the plant's identity (see GVDB: 410; AVS: 1: 334; Nadkarni 1954: #420).

- feel like a pebble ($aṣṭh\bar{\imath}l\bar{a}$) and it will lose its sense of taste. It stings and burns, and his saliva (śleṣman) dribbles out.¹¹⁹ In such a case, he should apply the treatment recommended above for vapour ($b\bar{a}ṣpa$), and what will be stated below under "toothbrush twigs".¹²⁰
- 40 On reaching his stomach, it causes stupor $(m\bar{u}rcch\bar{a})$, vomiting, the hair stands on end, there is distension, a burning feeling and an impairment of the senses.¹²¹
- In this case, vomiting must quickly be induced using the fruits of emetic nut (madana), bitter gourd ($al\bar{a}bu$), red gourd ($bimb\bar{\iota}$), and luffa ($kos\bar{\iota}tak\bar{\iota}$), taken with milk and watered buttermilk ($uda\acute{s}vit$), or alternatively with rice-water.
- Reaching the intestines (*pakvāśaya*), it causes a burning feeling, stupor, diarrhoea, thirst, impairment of the senses, flatulence (*āṭopa*) 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 $(d\bar{u}\bar{\imath}\bar{\imath}vi\bar{\imath}ari)$ ' should be drunk with honey and curds (dadhi).¹²²

On translating इन्द्रगोप as "velvet-mite," see Lienhard 1978. Dalhaṇa's remarks show that 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.

Dalhaṇa 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 गुड्ची, others for बाह्मी or चन्द्रतरु. Dalhaṇa 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 (see Wujastyk 2003: 76–78, 125). 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" (cited from Wren 1956: 262; not found in Osbaldeston and Wood 2000).

- 119 The word अष्टील is normally feminine. The Nepalese manuscripts read it with a short अending. Gayadāsa noticed that some manuscripts read अष्टील with a short -अ ending (MS
 Bikaner RORI 5157, f. 5v:7–8) and Dalhaṇa reproduced his observation. The vulgate reading
 "from his mouth (चास्यात)" is more obvious (lectio facilior), but is not attested in the Nepalese
 manuscripts.
- 120 Poisoned toothbrushes are discussed in verses 48 ff. below.
- 121 I translate मूच्छों in the light of the metaphors discussed by Meulenbeld (2011), that include thickening and losing consciousness.
- 122 The 'slow-acting poison' is discussed at $5.2.25\,\mathrm{ff.}$ (Su 1938: 565).

- 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. 123
- 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.¹²⁴
- When a toothbrush twig has poison on it, the bristles are corroded and the flesh of the tongue, gums and lips swells up. 125
- Then, once his swelling is lanced, one should rub ($pratis\bar{a}rana$) it with fire-flame bush flowers ($dh\bar{a}tak\bar{t}puspa$), jambul ($jamb\bar{u}$), mango stones ($\bar{a}mr\bar{a}sthi$) and chebulic myrobalan ($har\bar{t}tak\bar{t}$) fruit mixed with honey. 126
- Alternatively, the rubbing (*pratisāraṇa*) can be done with either the roots of sage-leaved alangium (*aṅkolla*), the bark of blackboard tree (*saptachada*) or siris seeds (*śirīṣamāṣaka*).¹²⁷
- 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 ($m\bar{a}msa$) splits open.
 - 123 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.
 - 124 The root $\sqrt{3}$ stink, putrify, rot" is apparently known only from its few uses in the *Suśruta-saṃhitā*.
 - 125 Gayadāsa and Dalhaṇa point out that "enclosure of a tooth (दन्तवेष्ट)" and "flesh of the tooth (दन्तमांस)" have the same meaning (2.16.14–26 (Su 1938: 331–332)).
 - 126 This recipe is different from the vulgate.
 - 127 The spelling of the name अङ्कोल varies अङ्कोट, अङ्कोट, अङ्कोट (GVDB: 5); Dalhaṇa notes that the form अङ्कोल is a colloquialism (1.37.12 (Su 1938: 161)). The sentence is awkward and we have emended হিাरीपमापक 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 (मापक) (5.1.50 (Su 1938: 562)).
 - 128 The feminine स्फोटा for "boils" is unattested.

I'm still unhappy about

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

fn about sadvas+

- In such a case, sandalwood, Indian rose-bay (tagara), ¹²⁹ costus, and vetiver grass ($u\acute{s}\bar{\imath}ra$), bamboo leaves ($venupatrik\bar{a}$), heart-leaved moonseed ($somavall\bar{\imath}$) and calamine ($amrt\bar{a}$), white clitoria ($\acute{s}vet\bar{a}$), sacred lotus (padma), and Indian barberry ($k\bar{a}l\bar{\imath}yaka$) 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 (kapittha). ¹³⁰
 - 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 massage (*abhyanga*).¹³¹
- 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, ¹³² ghee, beautyberry (*śyāmā*), ¹³³ black creeper (*pālindī*) and amaranth (*taṇḍulīyaka*). Good alternatives are either the fluid extract of cowdung, or the juice of jasmine (*mālatī*), the juice of woodrose (*mūṣikakarṇī*), or household soot. ¹³⁴

Bear's bile instead of deer's bile.

- If either massage oil for the head, or a helmet for the head, in a wash, 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*). In this case, the drink is honey and ghee, and the ointment (*pralepa*) is sandalwood with ghee, curds (*payasyā*),

¹²⁹ Some say तगर is Indian valerian, but there remain many historical questions about the ancient and regional identities of this plant (see, e.g., GVDB: 173-174)[334]avs.

¹³⁰ This compound could be interpreted as "wood apple juice and cassia cinnamon (*patra*)." Note that this recipe is differs from that of the vulgate, which requires urine.

¹³¹ See verse 52 above.

¹³² Dalhana comments here that 'bile is that fluid which goes along inside the tube attached to the liver' (কান্তব্যুভন্যনন্তিকাদ্ঘ্যান্সন্ত িদিন্দ) 5.1.57 (Su 1938: 562).

¹³³ See note 118.

The plant identifications in this passage follow Palhaṇa's glosses, although he noted a difference of opinion on the identity of mouse-ear ($m\bar{u}$, $m\bar{u}$). GVDB: 317; ADPS: 23–25 discussed this issue well.

The expression धूमो वागारसंज्ञितः '...or the smoke termed "house" is commonly interpreted by translators and in Ayurvedic dictionaries as 'household soot,' and this does seem to be the meaning, in context. The term was comprehensively discussed by Meulenbeld (2008: 443).

¹³⁵ See the description of this condition at 2.13.40 (Su 1938: 323), where the skin on the face is characterized as having pale circular patches that are itchy and have spots.

honey, verbena (phañjī), scarlet mallow (bandhujīva) and hogweed (punarnavā).136

in the N & K

śrita for śṛta

- Elephants and the like become ill and they dribble saliva. And the rider gets 62-63ab spots (sphota) 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 atis roots (ativis \bar{a}), is prescribed, with henna (madayantik \bar{a}), as a cold drink or errhine.

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.

65cd-66

When it is in ear-oil, there is degeneration in the ear, and painful swelling. 67 - 68There is also a discharge from the ear and in such a case it needs to be irrigated (pratipūrana) promptly with ghee and honey. Extracted juice (svarasa) of wild asparagus (bahuputrā) and very cold juice of white cutch tree (soma*valka*) are also recommended as something good. 137

explain more

- When poison is mixed in with eye make-up (añjana), he gets tears and rheum 69 (upadeha), with a burning feeling, pain, faulty vision (drstivibhrama), and possibly even blindness.138
- In this case, one must immediately drink ghee and have it also in an eyewash 70-71 (tarpaṇa) with long pepper (māgadha). One should have an eye ointment (a*ñjana*) of the juice of periploca of the woods (*mesaśrnga*) and have the extract (niryāsa) of three-leaved caper (varuna), wood apple (kapittha) and periploca of the woods (*mesaśrnga*) and the flower of marking-nut tree (*bhallātaka*).
- Because of poisoned slippers there will definitely be a swelling, numbness 72-73 (svāpa), a discharge (srāva) and an outbreak of spots (sphota) on the feet.

Medical difference from

example where the vulgate cla-rifies that these should be used sep-arately; appears to be a gloss inserted into the vulgate text.

- 136 The common plant-name पुनर्नेवा is read as पुनर्णिवा in both Nepalese witnesses. This unusual form is technically-speaking legal according to Pānini 8.4.3, but is not attested in published texts. पुनणेवा 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 Gaṇapatiśāstrī 1920-5: 20, where it is the name of a constellation.
- 137 The syntax of the Nepalese version is slightly unclear, but the vulgate has smoothed out the difficulties.
- 138 The term translated as "faulty vision" could also mean "rolling eyes."

- 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 $(avad\bar{a}rana)$. ¹³⁹
- One should apply the stated procedure for massage oil (*abhyanga*) to poisoned slippers and ornaments.
- 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. 140
- 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 $(m\bar{u}$, sik) or a fern $(ajaruh\bar{a})$ is tied on to the King's wrist, then all food that is mixed with poison will be rendered free of poison. 141
 - 79cd–80 He should always keep his heart protected (*hṛdayāvaraṇa*) when amongst people who are not his friends. He should drink the kinds of ghee called 'Invincible' and 'Immortal'. He should drink ghee (*sarpiṣ*), honey, curds (*dadhi*), milk (*payas*), or cold water.
 - He should consume monitor lizard, peacock, mongooses, chital deer (*pṛṣata*), and blackbuck (*hariṇa*) too, that destroy poison, and their juices.

139 The reading अवदारुण in MS Kathmandu KL 699 is not attested elsewhere in Sanskrit literature. On "sepsis" for पाक, see Wujastyk 2003: xlv-xlvi.

- 140 This antidote is indeed described later, in dramatic terms, at 5.6.14–27 (Su 1938: 581). A recipe with eighty-five ingredients including cow's bile, it is praised as chief of all antidotes, one that can drag the patient back from the very jaws of death, from even the poisonous fangs of Vāsuki.
- 141 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 Singh and Chunekar (GVDB: 7). Dalhaṇa (5.1.78 (Su 1938: 563)) cited a description of the two plants from the little-known authority Uśanas (HIML: IA, 660 et passim) that 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.
- 142 The *Carakasamhitā* described 'protecting the heart' as drinking several sweet, oily drinks to surround the heart and keep it safe (6.23.46 (Ca. 1941: 574)). Dalhaṇa explained it as taking a number of anti-toxic medicines, including those listed in the present passage, in order to cover or hide (সভ্জাৱন) the heart 5.1.79–81 (Su 1938: 563).
- 143 These ghee compounds are described in later chapters: see 5.2.47-49 (Su 1938:566) and 5.6.13 (Su 1938:581).

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

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

opposite of the vulgate Same as 1.8.89 (As 1980: 79).

- As discerning person should add well-crushed black creeper $(p\bar{a}lind\bar{t})$, ¹⁴⁴ liquorice (madhuka), and sugar to the meats of monitor lizard $(godh\bar{a})$, mongoose and blackbuck (harina) too.
- Add sugar and atis root (ativiṣā) to peacock flesh, together with ginger (mahauṣadha) And for meat from a chital deer (pārṣata), he should add long peppers (pippalī), with ginger (mahauṣadha).
- 84ab A cold neem broth with honey and ghee is wholesome too.

Medical difference.

- 84cd A discerning person should partake of hard and soft foods that counteract poison. 145
 - 85 If poison might have been drunk, a person who has protected his heart should make himself vomit using long pepper, liquorice, honey, sugar, sugarcane juice and water.

The first chapter in the Kalpas.

¹⁴⁴ Or some say turpeth.

¹⁴⁵ On this expression, Yagi, T. 1994. A Note on bhojya- and bhakṣya-. In: A Study of the Nīlamata. Aspects of Hinduism in Ancient Kashmir. Y. Ikari (ed.).

Kalpasthāna, adhyāya 2

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. 146

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

One path for exploration in this situation is to attempt to reverse-engineer some identifications by considering the known toxic plants of India. 148

Translation

- 1 And now I shall explain what should be known about stationary poisons. 149
- 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.
- 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.
- In that context,

¹⁴⁶ After Suśrutasaṃhitā, kalpasthāna 2.5 (Su 1938: 564). 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).

¹⁴⁷ See Wujastyk 2003: 80-81.

¹⁴⁸ Valuable reference sources on Indian plant toxicology in general include Pillay 2013: chs. 10, 11 and Barceloux 2008: parts 1.II, 3 and 4.

¹⁴⁹ No reference is made to Dhanvantari (see Birch, Wujastyk, Klebanov, Parameswaran, et al. 2021). "Stationary" here is a term contrasted with "moving," and signifies plants as opposed to animals and insects.

- the eight root-poisons are:
 - 1. liquorice (?),150
 - 2. sweet-scented oleander, 151
 - 3. jequirity, 152
 - 4. false daisy (?), 153
 - 5. *karaṭā*, 154 and ending with
 - 6. leadwort (vidyutsikh $\bar{a} \rightarrow agni$ or rakta-sikh \bar{a} ?) i , 155
 - 7. 'endless' (ananta)ii, and
 - 8. *vijayā*, 156
- the leaf-poisons include:
 - 'poison-leaf' (viṣapatrikā)ⁱⁱⁱ,

Expected (CIPP):
Croton tiglium, L. = Naepala, Jayapala, kanakaphala, titteriphala (NL #720);
Calotropis spp.;
Citrullus colocynthus (colocynthus, Ricinus communis (castor);

Note about Gayī's edi-

- 150 Liquorice eaten in excess can be poisonous, but it is unlikely to be the plant intended here. Singh and Chunekar (GVDB: 124) noted that the poisonous root mentioned in this passage, "remains to be identified."
- 151 The roots of sweet-scented oleander are highly toxic, as are most parts of the plant (Pillay and Sasidharan 2019).
- 152 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: # 6). The dose can be quite small.
- 153 The plant is usually called just *bhaṅgurā* without the prefix *su* "good." However, there is no reported toxicity associated with *E. prostrata*..
- 154 This poisonous root cannot at present be identified. Similar-sounding candidates include <code>karkaṭaka</code>, <code>karaghāṭa</code> (emetic nut), and <code>karahāṭa</code>, but since this is a prose passage, there would be no reason to alter the word to fit a metre. Monier-Williams et al. (MW: 255) 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.
- 155 The roots of both rose and white leadwort are very toxic.
- 156 Meulenbeld (1989: 61, n. 3) argued that our text read 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 this form only started to signify *Cannabis sativa* L. after the end of the first millennium (Meulenbeld 1989; Wujastyk 2002; McHugh 2021). The *Sauśrutanighaṇṭu* gives a number of synonyms for *vijayā*, almost none of which have any poisonous parts (Suvedī and Tīvārī 2000: 5.77, 10.143). But one of them, *viṣāṇī* (also *meṣaśṛṅgī*), is sometimes equated with *Dolichandrone falcata* (*DC.*) *Seemann* (ADPS: 518), a plant used as an abortifacient and fish poison (Nadkarni 1982*a*: #862). This identification is tenuous.

i Plumbago zeylanica (or rosea?), L.; see NK #1966, 1967

ii ?; see ?

iii unknown; see?

- 'drum-giver' (lambaradā)iv,
- thorn apple (karambha)^v, and
- 'big thorn apple' (*mahākarambha*)^{vi};
- the fruits of items like: jequirity $(gu\tilde{n}j\bar{a})^{vii}$, rūṣkara $()^{viii}$, viṣa $()^{ix}$, and vedikā $()^{x}$, are
 - kumudavati (kumadavati)xi,
 - renuka (?)^{xii},
 - kurūkaka (?)xiii
 - 'little bamboo' (veņuka)xiv,157,
 - thorn apple (*karambha*)^{xv},
 - 'big thorn apple' (mahākarambha)^{xvi},
 - 'pleaser' (nandanā)xvii,
 - 'crow' (kāka)^{xviii},
- the flower-poisons include those of:
 - rattan (*vetra*)^{xix},
 - wild chinchona (*kādamba*)^{xx},
 - black pepper ($vall\overline{i}ja \rightarrow marica$)^{xxi},
 - thorn apple (*karambha*)^{xxii}, and

157 Not poisonous.

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iv unknown; see?
    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 ; see
    ; see
xi unknown; see?
xii ?; see Piper aurantiacum Wall. (NK: #1924) is not poisonous.
xiii ?; see ?
xiv Bambusa bambos, Druce?; see NK #307
xv Datura metel, L.; see AVS 2.305 (cf. Abhidhānamañjarī), NK #796 ff., Potter 292 f., ADPS 132.
xvi Datura metel, L.?; see AVS 2.305 (cf. Abhidhānamañjarī), NK #796 ff., Potter 292 f., ADPS 132.
xvii?; see?
xviii?; see?
xix Calamus rotang, L.; see AVS 1.330, NK #413
xx Anthocephalus cadamba, Miq.; see NK #204
xxi Piper nigrum, L.?; see NK #1929; Rā.6.115, Dha.4.85, Dha.2.88
xxii Datura metel, L.; see AVS 2.305 (cf. Abhidhānamañjarī), NK #796 ff., Potter 292 f., ADPS 132.
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- big thorn apple (*mahākarambha*)^{xxiii};
- the seven bark, pith $(s\bar{a}ra)$ and resin $(niry\bar{a}sa)$ poisons are:
 - 'gutboiler' (antrapācaka) xxiv,
 - 'blade' (kartarīya)^{xxv},
 - wild mustard (saurīyaka)^{xxvi}
 - emetic nut $(karagh\bar{a}ta \rightarrow karah\bar{a}ta? \rightarrow madana)^{xxvii}$,
 - thorn apple (*karambha*)^{xxviii},
 - wild asparagus (nandana \rightarrow bahuputrā?)*xxix, and
 - munj grass (*nārācaka*)^{xxx};¹⁵⁸
- the three milky sap (*kṣīra*)-poisons are:
 - purple calotropis ($kumudaghn\bar{\imath} \rightarrow arka?$)*xxxi, 159
 - oleander spurge (snuhī)xxxii, and
 - 'web-milk' (*jālakṣīri*)^{xxxiii};
- the two element ($dh\bar{a}tu$)-poisons are:
 - 'foam-stone' (phenāśma)xxxiv, and

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xxiiiDatura metel, L.?; see AVS 2.305 (cf. Abhidhānamañjarī), NK #796 ff., Potter 292 f., ADPS 132. xxivunknown; see ? xxv unknown; see ? xxviCleome viscosa, L.? (cf. Rā.4.144); see AVS 2.116, NK #615 xxviRandia dumetorum, Lamk.; see NK #2091 xxviiDatura metel, L.; see AVS 2.305 (cf. Abhidhānamañjarī), NK #796 ff., Potter 292 f., ADPS 132. xxixAsparagus racemosus, Willd.; see ADPS 441, AVS 1.218, NK #264, IGP 103, IMP 4.2499ff., Dymock 482ff. xxx Saccharum bengalense, Retz.?; see NK #2184 xxxiCalotropis gigantea, (L.) R. Br.; see ADPS 52, AVS 1.341, NK #427, Potter 63 xxxiEuphorbia neriifolia, L., or E. antiquorum, L.; see ADPS 448, AVS (2.388), 3.1, NK #988, IGP 457b xxxiiinknown; see ? xxxiunknown; see ?
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¹⁵⁸ The bark of wild asparagus (Asparagus racemosus, Willd.) is toxic.

¹⁵⁹ 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.

- orpiment (haritāla)^{xxxv};¹⁶⁰
- the thirteen tuber-poisons are:
 - jequirity (*kālakūṭa*)^{xxxvi}, ¹⁶¹
 - wolfsbane (vatsanābha)xxxvii,
 - Indian mustard (sarṣapa)**xxviii,
 - leadwort $(p\bar{a}laka \rightarrow citraka)^{xxxix}$
 - 'muddy' (*kardama*)^{xl}, the
 - 'Virāṭa's plant' (vairāṭaka)^{xli},
 - nutgrass (*mustaka*)^{xlii}.
 - atis root (śṛṅgīviṣa)^{xliii},
 - sacred lotus (*prapundarīka*)^{xliv},
 - radish (mūlaka)^{xlv},
 - 'alas, alas' (hālāhala)xlvi,
 - 'big poison' (mahāviṣa)^{xlvii}, and

161 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.

xxxvArsenii trisulphidum; see NK v. 2, p. 20 ff.
xxxvAbrus precatorius, L.? Cf. RRS 21.14.; see AVS 1.10, NK #6, Potter 168.
xxxvAiconitum napellus, L.; see AVS 1.47, NK #42, Potter 4 f.
xxxvAiiassica juncea, Czern. & Coss.; see AVS 1.301, NK #378
xxxiPlumbago zeylanica (indica? rosea?), L.; see Rā. 6.124, ADPS 119, NK #1966, 1967
xl unknown; see ?
xlii unknown; see ?
xlii Cyperus rotundus, L.; see ADPS 316, AVS 2.296, NK #782
xliii Aconitum heterophyllum, Wall. ex Royle; see AVS 1.42, NK #39
xliv Nelumbo nucifera, Gaertn.; see Dutt 110, NK #1698
xlv Raphanus sativus, L.; see NK #2098
xlvi unknown; see Cf. Soḍhalanighantu p.43 (sub bola) = stomaka = vatsanābha
xlviiunknown; see ?

¹⁶⁰ Dutt (Dutt: 38–42) conjectured that 'foam-stone' may be impure white arsenic obtained by roasting orpiment.

• galls (karkata)xlviii. 162

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, 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 ($p\bar{a}rusya$), a headache, and a discharge of phlegm (kapha). 163

The milky sap ($k \bar{s} \bar{t} r a$)-poisons make one froth at the mouth, cause loose stool, and make the tongue feel heavy. ¹⁶⁴ The element ($dh \bar{a} t u$)-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.

¹⁶² 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 (\$h\bar{a}l\bar{a}hala\$) 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. Agrawala (1963: 126) makes the intriguing suggestion that the word \$h\bar{a}l\bar{a}hala\$, possibly to be identified with Pāṇini's \$hailihila\$ (P.6.2.38), may be of Semitic origin, although his evidence seems uncertain (Steingass (1930: 1506a) cites Persian \$hal\bar{a}hil\$ 'deadly (poison)' as a loan from Sanskrit). Mayrhofer 1953–72: iii.585 also cites a claim for an Austro-Asiatic origin for the word.

¹⁶³ At 1.2.6 (Su 1938: 11), Dalhaṇa glosses hoarseness (pāruṣya) as vāgrūkṣatā, "a rough, dry voice."

¹⁶⁴ At 6.54.10 (Su 1938: 773), Dalhaṇa glosses loose stool (viḍbheda) as dravapurīṣatā, "having liquid stool."

With jequirity $(k\bar{a}lak\bar{u}!a)^{xlix}$, there is numbness and very severe trembling. With wolfsbane $(vatsan\bar{a}bha)^l$, there is rigidity of the neck, and the faeces, and urine become yellow.

With sārṣapa ($s\bar{a}rṣapa$), ¹⁶⁵ the wind becomes defective ($v\bar{a}tavaigunya$), there is constipation ($\bar{a}n\bar{a}ha$), and lumps (granthi) start to appear. With leadwort ($p\bar{a}laka \rightarrow citraka$) ^{li}, there is weakness in the neck, and speech gets jumbled. ¹⁶⁶

With the one called 'muddy' (*kardama*)^{lii}, there is a discharge (*praseka*), the faeces pour out, and the eyes turn yellow. The 'Virāṭa's plant' (*vairāṭaka*)^{liii} 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*).¹⁶⁷

With great aconite ($mah\bar{a}vi$;a) one's limbs grow weak, there is a burning feeling and swelling of the belly. ¹⁶⁸

-> ativișa

- 16a With puṇḍarīka (puṇḍarīka), one's eyes go red, and one's belly becomes distended.
- 16b With mūlaka ($m\bar{u}laka$), one's body is drained of colour and the limbs are paralysed.¹⁷⁰

Look up the ca. reference.

- 165 *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.
- 166 The verse in the Nepalese version ends with a plural verb that does not agree with the dual of the sentence subject.
- 167 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 *Rājanighaṇtu* (22 v. 42) and *Rasaratnasamuccaya* 16, v. 80. However, its ancient identity is still doubtful.
- 168 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.
- 169 The word <code>pundarīka</code> very commonly means sacred lotus, Nelumbo nucifera, Gaertn. The entire plant is edible and cannot be the poison intended here. Singh and Chunekar (GVDB: 252) noted that this poison is unidentified and that it is also listed as a poison in <code>Carakasam-hitāci.23.12</code>.
- 170 The word *mūlaka* very commonly means the radish, *Raphanus sativus*, L. The root is edible and cannot be the poison intended here. Singh and Chunekar (GVDB: 317) noted that this

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

¹ Aconitum napellus, L.; see AVS 1.47, NK #38, Potter 4 f.

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

lii unknown; see?

liii unknown; see?

- 17a With hālāhala (*Aconite*), a man turns a dark colour (*dhyāma*), and gasps. 171
- With atis root $(\dot{s}\dot{r}\dot{n}g\bar{\imath}v\dot{\imath}\dot{s}a)^{liv}$, one gets violent knots (granthi) and stabbing pains in the heart. 172
- 18a With markata (*monkey*), one leaps up, laughs, and bites. 173
- Experts have said that one should know that the thirteen highly potent tuber-poisons, which are mentioned here, have ten qualities (*guṇa*).

19b-20a The ten are:

- dry (*rūkṣa*),
- hot,
- sharp,
- rarified (sūkṣma),
- fast-acting,
- pervasive (vyavāyin),
- expansive (vikāsin),
- limpid (viśada),
- · light, and
- indigestible.
- 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.¹⁷⁴
- Because it is fast-acting it kills quickly, and because of its pervasiveness it

poison is unidentified.

¹⁷¹ Identification of \$halahala\$ is uncertain. It may simply be a mythical poison, or its specific identity may have been lost over the centuries. Late \$nighantus\$ identify it as \$stomaka = vat-sanābha\$, i.e., \$Aconitum napellus\$, L. (Soḍhalanighantu p.43). Dalhaṇa on 5.2.17 (Su 1938: 564) interprets our "gasps" as "the man laughs and grinds his teeth." But this gloss is probably displaced and intended to apply to verse 2.18.

¹⁷² Singh and Chunekar (GVDB: 407) noted that *vatsanābha* and *śṛṅgīviṣa* are two different varieties of poisonous Aconites that are difficult to distinguish.

¹⁷³ Singh and Chunekar (GVDB: 299) said of *markaṭa*, "an unidentified vegetable poison." Cf. Suvedī and Tīvārī 2000: v.36 for synonyms that lead to the non-toxic jujube tree.

¹⁷⁴ 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.

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

affects one's whole physical constitution (prakrti).¹⁷⁵ Because of its expansiveness it enters into the humour (doṣa)s, bodily constituents ($dh\bar{a}tu$)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

- 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 by itself, 176 becomes a slow-acting poison $(d\bar{u}s\bar{i}visa)$. 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.
 - 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.¹⁷⁸
 - 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. ¹⁷⁹ and it rapidly becomes inflamed on days that are nasty because of cold and wind.
- 29d–31 Listen to its initial symptoms (*liṅga*): it causes heaviness due to sleep, yawning, disjunction (*viśleṣa*) and horripilation (*harṣa*) and a bruising of the limbs

¹⁷⁵ Dalhana on 5.2.22 (Su 1938: 565) explained this as "takes the form of pervading the whole body (akhiladehavyāptirūpam)."

¹⁷⁶ Dalhana specified that this refers to the ten qualities that are mentioned above (5.2.26 (Su 1938: 565)).

¹⁷⁷ Dalhana cited this verse at 1.46.83 (Su 1938: 222) while explaining dūṣīviṣa.

¹⁷⁸ Similar symptoms of slow-acting poison are described at 2.7.11–13 (Su 1938: 296) in the context of contamination dropsy (*duṣyodara*). This this may explain why the vulgate inserted reference to this disease at this point.

¹⁷⁹ The expression *ayathāyathoktān* "stated to be unsuitable" is hard to understand here, but is clearly transmitted in the Nepalese version.

(aṅgamarda). 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), dwindling away (kṣaya) of flesh, swelling of the feet, hands, and face, the fever called pralepaka, vomiting and diarrhoea. 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 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 ($d\bar{u}s\bar{i}-visa$)) 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 ($\bar{a}m\bar{a}\dot{s}aya$), it causes pain in the chest (hrd).
- In the third,his palate goes dry, he gets violent pain ($\sin la u$) in the stomach ($\sin la u$), 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.

¹⁸⁰ Palhaṇa 5.2.30ab (Su 1938:565) glossed "disjunction" as the loss of function of the joints in regard to movement.

¹⁸¹ The last ailment could perhaps be ringworm.

¹⁸² The pralepaka fever was described by <code>Dalhaṇa</code>, at 6.39.52 (Su 1938: 675), as an accumulation of phlegm in the joints. Its symptoms are described in 6.39.54

39b In the seventh, there are breaks in his shoulders, back and loins, and he stops breathing. 183

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;
- on the third, drink an antidote and a beneficial nasal medicine (*nasya*) as well as an eye salve (*añjana*).
- In the fourth, the physician should make him drink an antidote that is salt with a little oil.¹⁸⁴
- In the fifth, he should be prescribed the antidote together with a decoction $(kv\bar{a}tha)$ of honey and liquorice $(madhuka)^{lv}$.
- In the sixth, the cure (*siddhi*) is the same as for diarrhoea. And in the seventh, he perishes. 185
- 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.

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 (Wujastyk 2003: 145, n. 106). The same is the case at 5.5.24 (Su 1938: 575) and the clear description at 5.5.45 (Su 1938: 577), in neither of which is the therapy supported in the Nepalese version. This therapy seems unknown in the Nepalese version. Perhaps the therapy migrated into the *Suśrutasaṃhitā* from the *Carakasaṃhitā* (6.23.66–67 (Ca. 1941: 574)).

¹⁸³ Here at 5.2.24 (Su 1938: 566) Dalhaṇa glossed sannirodha as "complete cessation, i.e., of breath" (sannirodhaḥ samyaṅnirodhaḥ, ucchvāsasya iti śeṣaḥ). The manuscripts all read skanda where skandha must be intended; this confusion is known from Buddhist Hybrid Sanskrit (Edgerton 1953: 608).

¹⁸⁴ At 6.52.30 (Su 1938: 769) Dalhana noted that sindhu can be interpreted as salt (saindhava).

¹⁸⁵ 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 अव-सीदेत to the vulgate's अवपीड्य. The vulgate version is hard to construe, and we see Dalhaṇa struggling to interpret it in his commentary on 5.2.43ab (Su 1938: 566). This sternutatory is, however, recommended in the Nepalese version at 5.5.30ab (Su 1938: 576), for the seventh shock of poisoning by a rājimat (striped snake) snake. It is possible the text migrated from that location to this.

lv Glycyrrhiza glabra, L.; see AVS 3.84, NK #1136

A gruel (yavāgū) made of the following items in a stewed juice (niḥkvā-tha) destroys the two poisons: gourd (kośavatī), 186 wild celery (agnika), 187 velvet-leaf (pāṭhā), 188 'sun-creeper' (sūryavallī), 189 heart-leaved moonseed (amṛtā), 190 myrobalan (abhayā), 191 siris (śirīṣa) 192, and selu plum (śelu) 193 white siris (kiṇihi), 194 the two turmerics (haridrā), 195 and the two Indian nightshades (bṛhatī), 196 hogweed, peas, the three heating spices, the Indian sarsaparillas (sārive) 197 and water-lily (utpala). 198

¹⁸⁶ At 4.10.8 (Su 1938: 449) Dalhaṇa glosses kośavatī as devadālī and at 4.18.20 (Su 1938: 472) as kaṭukośātakī, vocabulary pointing to Cucumis cylindrica, Cucumis actangula or Luffa echinata (GVDB: 207, 121; ADPS: 252–253).

¹⁸⁷ A plant often cited in *Suśrutasaṃhitā*, but rarely in *Carakasaṃhitā* (GVDB: 4). Þalhaṇa glossed it here, 5.2.45 (Su 1938: 566), as wild celery (*ajamodā*), *Apium graveolens*, L., but noted that others consider it to be *moraṭa*, *Marsdenia tenacissima* (Roxb.) Wight et Arn. There is considerable complexity surrounding the identification of *moraṭa/mūrvā* and related synonyms (GVDB: 314-316). Taking *agnika* as a short reference to *agnimantha*, often identified with *Premna corymbosa*, Rottl., might be plausible, since that is antitoxic or anti-inflammatory (ADPS: 21; Nadkarni 1954: #2025; AVS: 4, 348), but such a short reference is not known elsewhere.

¹⁸⁸ Cissampelos pariera, L., ADPS: 366; Nadkarni 1954: #592; GVDB: 243-244; AVS: 2.277.

¹⁸⁹ At 5.2.45 (Su 1938: 566) Dalhaṇa said that this plant has leaves like the *paṭola*, *Trichosanthes dioica* Roxb. Singh and Chunekar (GVDB: 280, 443) argued plausibly that this is a synonym for *arkapuṣpī*, *Holostemma ada-kodien*, (Roxb.) Schult., as Dalhaṇa also stated in 1.45.120 (Su 1938: 206), and the leaves of Holostemma and Trichosanthes are indeed strikingly similar. The appearance of the plant, a creeper with sun-like flowers, fits the name. But there remains much controversy about the identities of these candidates (e.g., ADPS: 195–198).

¹⁹⁰ *Tinospora cordifolia*, (Willd.) Hook.f. & Thoms. (GVDB: 141–143; ADPS: 38–40)Nadkarni 1954: #2472 and #624.

¹⁹¹ Terminalia chebula, Retz. (ADPS: 172; Nadkarni 1954: #2451; GVDB: 15).

¹⁹² Albizia lebbeck, Benth. (AVS: 1.81; Nadkarni 1954: #91; GVDB: 399-400).

¹⁹³ Cordia myxa, L. non Forssk. (AVS: 2.180; Nadkarni 1954: #672; GVDB: 408, 413-414).

¹⁹⁴ Albizia procera, (Roxb.) Benth. (Nadkarni 1954: #93; GVDB: 98).

¹⁹⁵ haridrā and dāruharidrā GVDB: 465-466.

¹⁹⁶ Poison berry (*bṛhatī*), *Solanum violaceum*, Ortega, and yellow-berried nightshade (*kṣudrā*), *Solanum virginianum*, L. (GVDB: 277–278; ADPS: 100; Nadkarni 1954: #2329; AVS: 5.151, 164).

¹⁹⁷ country sarsaparilla (anantā) Hemidesmus indicus, (L.) R. Br. ADPS 434, AVS 3.141–5, NK #1210 and black creeper (pālindī) Ichnocarpus frutescens, (L.) R.Br. or Cryptolepis buchanani, Roemer & Schultes AVS 3.141, 3.145, 3.203, NK #1283, #1210, ADPS 434.

¹⁹⁸ *Nymphaea stellata*, Willd. GJM 528, IGP 790; Dutt 110, NK #1726. Dalhana was aware of this reading 5.2.46 (Su 1938: 566).

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, water-lily, sugar, embelia, sandalwood, cassia cinnamon, beautyberry, rosha grass, the two turmerics, ¹⁹⁹ the two Indian nightshades, ²⁰⁰ Indian sarsaparilla and beggarweed, and country mallow.

Curing the 'slow-acting' poison

- Someone suffering from "slow-acting poison $(d\bar{u} \bar{s} \bar{\iota} v i \bar{s} a)$ " 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 $(d\bar{u} \bar{s} \bar{\iota} v i \bar{s} \bar{a} r i)$," and it is not prohibited in other situations.
- If there are any other side-effects (*upadrava*), such as fever, a burning feeling, hiccups, constipation ($\bar{a}n\bar{a}ha$), depletion of the semen, distension, diarrhoea, fainting, skin problems, bellyache (jathara), madness, trembling, then one should treat each one in its own terms, using anti-toxic 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.

¹⁹⁹ turmeric and Indian barberry.

²⁰⁰ poison berry and yellow-berried nightshade.

Kalpasthāna, adhyāya 3

Introduction

Translation

And now we shall explain the rule (*kalpa*) that is the required knowledge about mobile poisons.²⁰¹

2

The full explanation about the sixteen carriers (*adhiṣṭhāna*) of the mobile poisons, that have been mentioned by me in brief, will be stated.

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

- 4 In that context, they are:
 - sight and breath,
 - · teeth and nails,
 - mouth,
 - urine and faeces,
 - menstrual blood,
 - semen,
 - penis,
 - saliva,
 - lethal points,
 - nipping with the mouth (*mukhasaṃdaṃśā*),
 - fart (avaśardhita),²⁰³
 - anus, 204
 - bones,
 - bile,
 - bristles ($\sin ka$), and
 - · corpses.
- 5 TBA
- 6 The enemies of the king pollute the waters, roads and foodstuffs in enemy

²⁰¹ In contrast to stationary, plant poisons. No reference is made to Dhanvantari (see Birch, Wujastyk, Klebanov, Parameswaran, et al. 2021).

^{202 &}quot;Carrier" for base, foundation ($adhisth\bar{a}na$) tries to capture the idea that the author will describe the creatures in which poisons inhere.

²⁰³ This interpretation comes from Dalhana on 5.3.4 (Su 1938: 567), but he reads विशिष्ति.

²⁰⁴ Dalhana on 5.3.4 (Su 1938: 567) noted this reading.

- 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.²⁰⁵ 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.²⁰⁶ He should try to purify that 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.
- 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, it swells up and burns and its hair and nails fall out on that place.²⁰⁷

11

²⁰⁵ अस्र normally means "tears," but rarely means "blood."

²⁰⁶ On the polysemy of elephant/snake (nāga), see Semeka-Pankratov 1979.

^{207 &}quot;Swells up" translates an unclear reading that was probably श्यति, which may be an irregular form of √शू, श्वा, श्वि (see Whitney 1885: 175−176).

Uttaratantra, adhyāya 16 (17 in the vulgate)

Literature

Survey of this chapter and the existing research on it to 2002: HIML: IA, 305–306. History of couching in India: Scott 1817; Breton 1826; Jack 1884; Hendley 1895; Elliot 1918; Śāstrī 1940; Deshpande 1999; 2000; Wujastyk 2019; Leffler et al. 2020, Wujastyk 2003: 65–67.

Translation

- 1 Now I shall explain the counteraction (*pratiṣedha*) of diseases located in the pupil (*dṛṣṭi*).
- 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 ($dh\bar{\imath}adarsin$)".²⁰⁸
- When the eye is inflamed (*vidagdha*) by bile and when it is inflamed by phlegm, one should apply the method for removing bile and phlegm, using nasal medicines (*nasya*), irrigation (*seka*), application of collyrium (*añjana*), liniment (*ālepa*), and medicines cooked in a crucible (*puṭapāka*), together with an eyewash (*tarpaṇa*),²⁰⁹ but not cutting with a blade (*śastrakṣata*).²¹⁰ One should drink ghee (*sarpis*) prepared with the three fruits (*triphalā*) and in the first [case where the problem is bile], and prepared with turpeth (*traivṛta*) in the latter [case, of phlegm].

where is cutting with a knife related to removing bile or 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*);

maṣī burned charcoal. Find refs.

²⁰⁸ This disease and its cure are described earlier (SS.6.7.39 and SS.6.10.16 (Su 1938:609 and 614) respectively). The latter part of this verse is hard to construe and the text here may have been altered at an early period.

²⁰⁹ These therapies are described in SS.6.18 (Su 1938: 633-640).

²¹⁰ Dalhana interpreted this as blood-letting (sirāvedha), which is discussed in SS.1.14 (Su 1938).

- stalk (*vṛnta*) from a wood apple (*kapittha*) with honey (*madhu*);²¹¹
- or the the fruits of the velvet bean (*svayaṃgupta*).
- The physician should make a collyrium with ground up metal (*kupyaka*), ²¹² 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 ($jamb\bar{u}$) 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 ($go\acute{s}akr\acute{t}$) are a collyrium in the form of a pill ($gu\acute{q}ik\bar{a}$). This is good for both day and night blindness.
- Elixir-salve (*rasāñjana*), honey (*kṣaudra*), ghee, scramberry (*tālīśa*), together with gold and ochre, with the juice of cow-dung (*gośakṛt*) are for an eye afflicted with bile.
 - Alternatively, wise physician should first grind together elixir-salve (\hat{stta}) and stibnite ($sauv\bar{t}raka$), 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 ($k\bar{a}r\acute{s}mar\bar{\iota}$) flowers, liquorice (madhuka), tree turmeric ($d\bar{a}rv\bar{\iota}$), lodh tree (lodhra) and elixir salve ($ras\bar{a}\tilde{n}jana$) is always good as a collyrium in this case.
 - Alternatively, for those who cannot see during the day, this pill $(gudik\bar{a})$, with sandalwood, is recommended: salt $(nad\bar{i}ja)$, conch shell and the three spices, collyrium, realgar $(manah\acute{s}il\bar{a})$, the two turmerics $(rajana)^{214}$ and liver extract

²¹¹ Wood apple (कपित्थ) in this verse is ablative singular or accusative plural, neither of which construe obviously.

²¹² A metal other than gold or silver, according to V. Jośī and N. H. Jośī (1968: 1.217). Perhaps lead, which is used in making contemporary collyrium.

²¹³ This was Dalhaṇa's preferred interpretation of rasa "juice" in this context. He also noted that some take elixir-salve (\hat{sita}) to be camphor.

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.

(yakṛdrasa).215

- One should grind up kohl (*srotoja*),²¹⁶ and Sind salt (*saindhava*) and long pepper and also hareṇu (*hareṇu*). Such wicks with goats urine are good in a collyrium for night blindness (*kṣaṇadāndhya*).
- Alternatively, in such a case, grind together Indian sarsaparilla ($k\bar{a}l\bar{a}nus\bar{a}-riva$)²¹⁷ 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 (*manaḥśilā*), chebulic myrobalan (*abhayā*), the three spices (*vyoṣa*). Indian sarsaparilla (*sāriva*), cuttlefish bone (*samudra-phena*), combined with goat's milk are good.
- One should cook a honey collyrium (kṣaudrāñjana) either in the juices of cow's urine ($gom\bar{u}tra$), and bile, spirits ($madir\bar{a}$), liver (yakṛt), and emblic ($dh\bar{a}tr\bar{\iota}$) or else in the juice of the liver (yakṛt) of something different, or else with the extract of the three fruits ($triphal\bar{a}$). One of these should be mixed with cow urine, ghee and cuttle fish (arnavamala)²¹⁸ with long pepper, honey and box myrtle (katphala). 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.²¹⁹

²¹⁵ This verse appears as no. 27 in the vulgate.

²¹⁶ Glossed by Dalhana as a kind of collyrium. Cf. Nadkarni 1954: 2.M13 and P. V. Sharma 1982: 197–198

²¹⁷ There are two forms of *sārivā* mentioned widely in Āyurvedic literature, the white and the black. Ideas on the identity of the black form are particularly fluid. See Sivarajan and Balachandran (ADPS: 434–438) for a clear discussion.

²¹⁸ 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.

On the identities of <code>elā</code> and <code>harenu</code>, Watt (1908: 511 ff) 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>. Singh and Chunekar (GVDB: 467 f) provided an interesting discussion of <code>harenu</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>renukā</code>

- 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.²²⁰
- 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.²²¹ In the case of diseases of blood (*śonita*) and bile (*pitta*), one should drink ghee with the three fruits; it is particularly cleansing.²²² In the case of phlegm, a purgative by means of turpeth (*trivṛt*) is recommended. In the case of all three humours, sandal (*sugandhi*) in oil is prepared with it (turpeth).²²³
 - 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).²²⁴
 - 29cd Alternatively, someone afflicted by phlegm should apply them (the three fruits) mixed with oil and steeped (*pragādha*) 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.

⁽SS.ci.2.75).

²²⁰ 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.

²²¹ Dalhana said that the unexpressed topic of this recipe is partial blindness (timira).

²²² Blood-bile (*śonita-pitta, rakta-pitta*) is a widely-recognized disease in ayurveda, but the compound here is definitely dual, which rules out that interpretation. One would expect blood-bile because the previous verse

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.

[&]quot;Off his hand" translates the adverbial $sap\bar{a}nam$, an unusual word. Dalhana reproduced a reading close to the Nepalese recension but says that Jejjata rejects it and so he also does (susr-trikamji3).

- In cases caused by bile, ghee by itself is good, as is oil when it arises from wind and blood.
- 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). ²²⁵ Ghee which has been extracted from milk cooked with the meat of aquatic creatures and those from marshlands should be prescribed.
- †An 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.²²⁶
 - 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. † 227
- Having prepared (*niṣevita*) a collyrium made of kohl (*srotas*) and gradually combine it with juices (*rasa*), milk and ghee.²²⁸
 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 (*māgadhī*), lye (*kṣāraka*) and Sindh salt (*saindhava*) that has been repeatedly prepared with the mouth of a black snake, is good in the case of bloodshot blindness (*rāgin timira*).²²⁹
- 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.

The term 'enclosed roasting' (puṭapāka) does occur in the Suśrutasamhitā in the context of eye treatments, but designates a method of obtaining juice from substances by wrapping them in leaves pasted with earth and cooking the bolus on charcoal to finally extract a juice.

- 227 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.
- 228 Dalhana specified that the juices are meat soups of various animals (Su 1938: 628).
- Dalhaṇa described this blindness as a type of $k\bar{a}ca$ disease caused by wind (susr-trikamji3). 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.

^{225 &}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.

²²⁶ Þalhaṇa noted (Su 1938: 628a) 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 (Su 1938: 635). On the puṭa process in the Suśrutasaṃhitā, which is earlier and different than that of rasaśāstra literature, see the discussion by Wujastyk (2019: 83):

- And here, an eyewash (*tarpaṇa*) is good that is a combination that is the flesh of wild animals taken hot (*putāhvaya*).²³⁰
- 36 And realgar ($mana h sil \bar{a}$) mixed with elixir salve ($ras \bar{a} \tilde{n} jana$) and honey is a liquid collyrium ($drav \bar{a} \tilde{n} jana$) which is, in this case, combined with mahua ($madh \bar{u} ka$).²³¹
 - Alternatively, experts on this say that finely ground blue vitriol (tuttha) extracted from a gold mine is the "same collyrium ($sam\bar{a}\tilde{n}jana$)".²³²
- Conch mixed with equal parts of sheep's horn and stibnite ($a\tilde{n}jana$) removes the impurity of the glassy opacity ($k\bar{a}ca$) because of the application of collyrium ($a\tilde{n}jana$).²³³
 - The extracts (rasa) produced from aflame of the forest ($pal\bar{a}sa$), Rohīta tree ($roh\bar{t}ta$), 234 mahua ($madh\bar{u}ka$), ground with the supernatant layer (agra) of the spirits (madira) is applied.
- Alternatively, one should cook an errhine with cuscus grass ($u \le \overline{v}$), lodh tree (lodhra), the three fruits ($triphal\overline{a}$), beauty berry (priyangu) to pacify eye diseases caused by phlegm.²³⁵
 - One should apply smoke of the bark of embelia ($vida\dot{n}ga$), velvet leaf ($p\bar{a}th\bar{a}$), white siris ($kinih\bar{i}$), and desert date ($i\dot{n}gud\bar{i}$); and cuscus grass ($u\dot{s}\bar{i}ra$) alone.
- A ghee that is cooked ($bh\bar{a}vita$) from a decoction of a non-flowering tree (va-naspati)²³⁶ as well as turmeric ($haridr\bar{a}$) and spikenard (nalada) is good in a eyewash (tarpana).
 - Alternatively, one may have an enclosed roasting ($puṭap\bar{a}ka$) done with aridland animals ($j\bar{a}\dot{n}gala$)²³⁷ and a plentiful amount of long pepper ($m\bar{a}gadha$),

²³⁰ The expression taken hot (putāhvaya) is a guess.

²³¹ The expression liquid collyrium (*dravāñjana*) is only known from Dalhaṇa's comments on 6.17.11ab (Su 1938: 626). The recipe in the present collyrium is different from that discussed by Dalhaṇa.

²³² On *tuttha*, which may also be identified with zinc oxide or as crushed sea-urchin shells, see Falk (1991: 112 ff.); 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 Dalhana as "a collyrium with an equal amount of fermented barley" (*tulyasauvīrāñjana*) (Su 1938: 628).

²³³ The ablative "from collyrium" is hard to construe, but Dalhana used this term and phrase in his commentary on 6.17.41ab (Su 1938: 629).

²³⁴ Probably Soymida febrifuga A. Juss.

²³⁵ Dalhaṇa invoked a general rule ($paribh\bar{a}s\bar{a}$) to indicate that this mixture should be cooked with sesame oil.

²³⁶ These are fig trees. The *Sauśrutanighaṇṭu* (252) specifies the Udumbara. Cf. the classification in CS.1.1.71–72, 1.8, *et passim*.

²³⁷ On this term, see SS.1.35.42 (Su 1938: 157) and the discussion by Zimmermann (1999: 25-31).

Sindh salt and honey.

- A treatment ($kriy\bar{a}$) with realgar ($mana \dot{h} \acute{s}il\bar{a}$), the three spices, conch, honey, along with Sindh salt, green vitriol ($k\bar{a}s\bar{i}sa$) and elixir salve ($ras\bar{a}\tilde{n}jana$). They say that an elixir salve ($ras\bar{a}\tilde{n}jana$) combined with myrobalans, treacle and dried ginger is good. 39
- Alternatively, a collyrium that has been prepared many times in the eight types of urine²⁴⁰ is put into water with the three fruits. Having stored it in the mouth of a nocturnal creature ($ni\dot{s}\bar{a}cara$)²⁴¹ one should place it in a conch (salilotthita) for two months.²⁴²

find ref.

- One should apply that collyrium together with the flowers of mahua ($ma-dh\bar{u}ka$) 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 ($ml\bar{a}yin$).²⁴³

Check out these refs.

- For one who has a humour, the physician should consider the rule in all humoral cases and then smear the ointment on the face.²⁴⁴

 The treatment that is good for removing watery eye (*syanda*) should be properly applied in all these humoral cases, according to the individual.²⁴⁵
- 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.²⁴⁶
- Someone who uses matured ghee, the three fruits, wild asparagus (śatāvarī), as well as mung beans (*mudga*), emblic and barley has nothing to fear from

meaning of kalpa

²³⁸ Dalhana glossed treatment (*kriyā*) specifically as inspissation (*rasakriyā*) (Su 1938: 629).

²³⁹ We emend hite to hitam, against the MSS.

²⁴⁰ See SS mūtravarga

²⁴¹ Dalhana glossed nocturnal creature (*niśācara*) as "vulture," although elsewhere in the *Suśrutasaṃhitā* it is more commonly interpreted as a spirit or demon. In the present context, following verses 33 and 34, it is probably a snake.

²⁴² We interpret "water-born (salilotthita)" as "conch" in line with jalodbhava, but the term is uncertain.

²⁴³ The vulgate follows Þalhaṇa in glossing $ml\bar{a}yin$ as $pariml\bar{a}ya$. The description of this condition at SS.6.7.27–28 appears to refer to "blue dot" or "cerulean" cataract. \sqrt{mlai} derivatives can mean "dark" or "black."), which is normally a different ailment.

²⁴⁴ The vulgate edition omits part of this verse (ab) combining earlier and later passages.

²⁴⁵ The term watery eye (*syanda*) refers to the specific disease *abhiṣyanda*. See SS.6.6.5, 1.46.51, etc.

²⁴⁶ Dalhana noted that *Kalpa* means the Uttaratantra adhyāya 18 (Su 1938: 633 ff).

- 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.
- And bloodshot blindness (*araga timira*) in the first layer (*paṭala*) is treatable. And bloodshot blindness (*rāgiṇi timire*) in the second layer, with difficulty. And in the third layer it can be mitigated (*yāpya*).²⁴⁷
- 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*).
- 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.²⁴⁸
- At a time that is neither too hot or too cold, the patient who has been oiled and sweated is restrained and seated, looking symmetrically at his own nose. The wise physician should separate (muktvā) two white sections from the black part (kṛṣṇa) and from the outer corner of the eye (apāṅga). Then he should press (pīḍ-) properly into the eye,²49 at the naturally-occurring (daivakṛte) opening (chidra) with a probe (śalākā) made of copper or iron, with a tip like a barley-corn, held by a steady hand with the middle finger, forefinger and thumb, the left one with the right hand and the other one contrariwise. When the piercing is done properly, there is the issue of a drop of liquid and a sound.²50
 - The expert should moisten the exact place of piercing with a woman's breastmilk. Then he should scratch the circuit of the pupil (*drstimandala*) with the

²⁴⁷ Although the text says with difficulty (*kṛcchra*), the implication is that it is untreatable (*asā-dhya*) (cf. 6.17.2 (Su 1938: 625) above). The three categories, treatable, untreatable and possibly mitigated are standard categories of triage.

²⁴⁸ 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.17.1–3 (As 1980: 712)). These characteristics are then read as conditions that preclude surgery; for the Nepalese recension, they are simply descriptions of the appearance of a cataract.

²⁴⁹ 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.

²⁵⁰ Dalhana remarked on 6.17.61ab (Su 1938: 630) that when the piercing is not correctly done, blood issues and there is no sound.

- tip of the probe (śalākā).251
- Without injuring, gently pushing the phlegm in the circuit of the pupil against the nose, he should remove it by means of sniffing (*ucchingana*).²⁵²
- Whether the humour is solid ($sty\bar{a}na$) or liquid (cala), one should apply sweating to the eye externally, with leaves ($bha\dot{n}ga$) that remove wind, after fixing the needle ($s\bar{u}c\bar{\iota}$) properly.²⁵³
- 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 ($śalāk\bar{a}$).²⁵⁴
- 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.²⁵⁵
- At that time, he should not belch, cough, sneeze, spit or shiver. Afterwards there should be restrictions ($yantran\bar{a}$) as in the case of someone who has drunk oil.²⁵⁶
- 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.
- 251 The anatomy of the eye is described in 6.1.14–16 (Su 1938: 596). The disks or *maṇḍala*s are the circuits or disks of the eye.
- 252 Dalhaṇa described sniffing (*ucchingana*) at 6.19.8 (Su 1938: 641), clearly intending inward sniffing.
- 253 We interpret *bhaṅga* as leaves, following the usage elsewhere in this sthāna 4.32.9, 6.11.5 (Su 1938: 513, 614) where *bhaṅga* means shoots (*pallava*). A similar procedure is described at 6.17.25 (As 1980: 716a), where sweating of the eye is done by means of the leaves of a castor-oil plant.
- 254 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.
- 255 Palhaṇa explained disturbances specifically as dust, smoke, drafts and sunlight 6.17.67 (Su 1938: 631a).
- 256 Dalhaṇa glossed "restrictions (yantraṇā)" as having a controlled diet and the other restrictions appropriate to someone who is taking oil as a preparation before further therapy (6.17.68 (Su 1938: 631)). These restrictions are also described at 6.18.28 (Su 1938: 635) and 1.16.25cd (Ah 1939: 249).

[Complications]

- When there is a misshapen eyeball (*vilocana*), the eye may fill because of the release of blood from a vein.²⁵⁷
 - A hard probe leads to shooting pain (\hat{sula}), a thin to unsteadiness of the humours (dosapariplava), ²⁵⁸
- 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).²⁵⁹
- 66 Therefore, one should make a good probe that is free from these defects.

[Characteristics of the probe]

The probe should be eight finger-breadths long and in the middle it is wrapped with thread and is as thick as a thumb joint. It is shaped like a bud at both ends (*vaktra*).

67 A commendable probe should be made of silver, iron or gold (śātakumbhī).²⁶⁰

[Complications]

Redness, swelling, lumps, driness (coṣa), bubbling (budbuda), 261 pigs' eye ($s\bar{u}$ - $kar\bar{a}kṣit\bar{a}$), 262 , 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 (gairikaḥ), Indian sarsaparilla (śārivā), panic grass (dūrvā), and ghee ground with barley.

²⁵⁷ The condition of "misshapen eye" is referred to briefly in 6.61.9 (Su 1938: 800), where <code>Dalhana</code> glossed it as "bent brow and eye (*vakrabhrūnetra*)." The vulgate's reading of "with blood (*śonitena*)" is easier to construe.

²⁵⁸ There is a medically significant difference here from the vulgate, which reads "a rough (*khara*) probe" not a "thin" probe.

²⁵⁹ This translation of loss of function (*kriyāsaṅga*) is given on the basis of Dalhaṇa's gloss of *kriyāsaṅgakarin* at 3.8.19 (Su 1938: 382) as "causing the destruction of actions such as moving (*gamanādikriyāvināśakarī*)."

²⁶⁰ The vulgate reads "copper (tāmra)" in place of "silver."

²⁶¹ Palhaṇa glossed "bubbling (budbuda)" as "prolapse (māṃsanirgama) that looks like bubbles."

²⁶² The expression "pigs' eye" appears to be a *hapax*. It was glossed as "downward vision (*a-dhodṛṣṭitva*)" by Dalhaṇa.

- 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*).²⁶³ This is immediately beneficial when someone is looking for relief.
- A paste with Holostemma ($payasy\bar{a}$), 264 Indian sarsaparilla ($ś\bar{a}riv\bar{a}$), cassia cinnamon (patra), Indian madder ($ma\tilde{n}jis\dot{t}h\bar{a}$), and liquorice (madhukair) stirred with goat's milk, pleasantly warmed, is said to be healthy. 265
- 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 $(dr\bar{a}k\bar{s}\bar{a})$, lac $(l\bar{a}k\bar{s}\bar{a})$, white sugar $(sit\bar{a})$, with wild asparagus, Hare Foot Uraria $(prthakparn\bar{\iota})$, 266 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. ²⁶⁸
- 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.²⁶⁹
- 78cd-80ab Now listen to two excellent collyriums for making the pupils clear. After

²⁶³ On the adverbial use of gently (mrdu), see Gombrich 1979.

²⁶⁴ The identity of payasyā is debated (GVDB: 538), and was already in doubt at the time of Dalhana but likely candidates may be those suggested by Dalhana, who suggests either arkapuṣpī or kṣīrakākolī, that may be Holostemma adakodien Schult. and Leptadenia reticulata (Retz.) Wight & Arn. (ADPS: 195-196). The Sauśrutanighanṭu glosses it as kṣīrikā or arkapuṣpikā (Suvedī and Tīvārī 2000: v. 307).

²⁶⁵ The expression "stirred with goat's milk ($aj\bar{a}k\bar{s}\bar{t}r\bar{a}rdita$)" is difficult. It may be connected with the rare root ard documented by Whitney (1885: 15). Cf. $\sqrt{ard\ gatau}$ ($Dh\bar{a}tup\bar{a}tha\ 1.56$).

²⁶⁶ Suvedī and Tīvārī 2000: 18.

²⁶⁷ Palhaṇa mentioned that these drugs include Deodar (*bhadradāru*) and other wind-destroying drugs. The *vātasaṃśamana* group is listed in *Suśrutasaṃhitā sūtrasthāna* 1.39.7.

²⁶⁸ Dalhana noted that this would include errhines, ointments, etc.

²⁶⁹ 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.

- grinding the flowers of perploca of the woods (meṣasṛnga), siris (sirīṣa), axelwood (dhava) royal jasmine ($jāt\bar{\iota}$), pearl and beryl ($vaid\bar{\iota}urya$) 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 as a collyrium. Alternatively, one should make kohl (*srotoja*), coral (*vidruma*), cuttlefish bone (*phena*), and realgar (*manaḥśilā*) and peppers into wicks as before. One should apply these wicks, which are good in a collyrium, to steady the pupil.



82 I shall again discuss the foremost collyriums at length in the *Kriyākalpa* section. Those various methods may be applied here too.

Uttaratantra, adhyāya 38

Introductory remarks

Summary of the Content 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.

Placement of the Chapter While in Su 1938 the current chapter is found at the end of the section on paediatrics (*Kumāratantra*, or *Kumārabhṛtya* as this section is styled in MS Kathmandu KL 699), in the Nepalese version, this is chapter 6.58, and it is chapter 23 of an entirely different section, namely, the *Kāyācikitsā*. 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 11 chapters). Dalhaṇa (Su 1938: 668b) explains 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 (yonivyāpat), the chapter called Countermeasures Against Disorders of the Female Reproductive System (yonivyāpatpratiṣedha) (SS.6.38) is taught immediately after the chapter called Origination of Planetary Deities (grahotpatti) (SS.6.37). 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 SS.6.37.13bc) and because (2)

the disorders of the female reproductive system (*yonivyāpat*) are the causes for the inborn disorders of children.²⁷⁰

- In the placement of the Nepalese version, *Yonivyāpatpratiṣedha* is preceded by 6.56 *Mūtrāghātapratiṣedha* (6.58 in Su 1938) and 6.57 *Mūtrakṛc-chrapratiṣedha* (6.59 in Su 1938), two chapters dealing with the diseases of the urinary tract. The current chapter carries on with the topic of diseases that affect genitalia. In its Nepalese version, the chapter opens with two verses that explain the reasons for treating the particular set of diseases. These lack any reference to the inborn disorders of children (*kumāraja-nmavikāra*) mentioned by Ṣalhaṇa, and instead highlight the importance of curing female diseases for the satisfaction of male partner.
- SS.1.3 in both Su 1938 and the Nepalese version lists the chapter at the place, where it is found in the vulgate (Cf. Sū.3.37ab: naigameṣacikitsā ca grahotpattiḥ sayonijāḥ).
- 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 *Mādhavani-dāna* (MN) 62, or at least its version printed in @@empty citationempty citation. The readings of the MN 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 MN. 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 second half of the 11th – first half of the 12th centuries (Meulenbeld 1974: 22–26).

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

²⁷⁰ Palhaṇa on SS.6.38.1: grahotpattyadhyāyanantaraṃ 'tityagyoniṃ mānuṣaṃ ca' iti vacanena yoner nāmasaṃkīrtanāt kumārajanmavikārakāraṇatvāc ca, yonivyāpaccikitsitārthaṃ yonivyāpatpratiṣedhādhyāyārambho yujyate [...]/

Translation

- 1 And now I shall explain the countermeasures against disorders of the female reproductive system (*yonivyāpat*).²⁷¹
- *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.²⁷²
- 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).

Philological Notes The first two verses (2 and 3) in the Nepalese version are written in a classical variety of the *upajāti* metre:

$$U_UU_UU_UU_U$$

In content, they are only approximately parallel to three hemistichs in *anuṣṭubh* metre found in Su 1938. The latter verses lack the apologetic explanation concerning the reasons for this chapter being taught.

Humours (doṣa), wind ($v\bar{a}ta$), etc., corrupted due to faulty medical treatment ($mithyopac\bar{a}ra$), ²⁷³ sexual activity, fate, and also defects (doṣa) of menstrual

²⁷¹ On this broad understanding of the term *yoni*, see Das 2003: pp. 572-5

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.'

In our translation of the compound *mithyopacāra*, we decided for the technical meaning of the term *upacāra*, that is, 'medical application' or 'treatment'. The combination *mithyā* + *upa-\sqraa* is attested several times in medical literature. At least once, at CS Vi.3.38, it is given an explicit commentarial gloss (by Cakrapāṇidatta): "*mithopacaritān iti asamyak cikitsitān*". In the SS (Su 1938), it is used once in Ut.18.30, where it refers specifically to the wrong application of? (*tarpaṇa*) and? (*putapāka*), both of which are mentioned in the previous verse. Another use of the compound in a seemingly conforming meaning is found in a citation from Bhoja's text quoted by Gayadāsa at SS Ni.5.17: "śvitraṃ tu dvividhaṃ proktaṃ doṣajaṃ vraṇajaṃ tathā/ tatra mithyopacārād dhi vraṇasya vraṇajaṃ smṛtam // ...". In contrast to this, the parallel verse in Su 1938 = CS Ci.30.7 = MN 62.1 reads *mithyācāra* 'wrong conduct'. All commentators (Cakrapāṇidatta on the CS, Śrīkaṇṭhadatta on the MN, and Dalhaṇa on the SS) explain that the wrong conduct stands here specifically for unwhole-

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

Philological Notes The Nepalese version of the SS continues here with 3 hemistichs in classical *upajāti* metre (see the syllabic pattern above). On the other hand, Su 1938 contains two complete verses (4 hemistichs) in the *anuṣṭubh*. Three final hemistichs are found verbatim in CS Ci.30.7cd–8. It is very likely that the these verses were borrowed from the CS into SS (and not the other way around), because CS Ci.30.7cd = SS Ut.38.5ab says that the 20 kinds of diseases were already taught in the Collection of Diseases (*rogasaṃgraha*). In the context of the SS, this reference does not make any sense and is left uncommented by Dalhaṇa. In case of the CS, however, Cakrapāṇidatta explains that this reference points back to CS Sū.19, a chapter that does, in fact, lists all the diseases dealt with in later sections of the text. 20 diseases of female reproductive system (*yoni*) as mentioned in Sū.19.3.

The above three hemistichs in *anuṣṭubh* are also repeated in MN 62.1–2ab. Given that all following verses stem from the SS, it is likely that MN 62.1–2ab too was incorporated into the text from the SS (and not its original location in the CS).

- *6.1 Because of wind (*vāta*), female reproductive organ (*yoni*) becomes:
 - 1. ? (*udāvartā*),
 - 2. called Infertile (*vandhyā*), and
 - 3. Sprung ($plut\bar{a}$),
 - 4. Flooded (pariplutā), and
 - 5. Windy (vātalā).
- *6.2 And because of choler (pitta), occur:
 - 1. With bloodloss (raktaksayā),
 - 2. Vomiting (*vāminī*), and
 - 3. Causing a Fall (*sraṃsanī*),
 - 4. Child-murderess (putraghnī), and also
 - 5. Bilious / Choleric (*pittalā*).
- *7.1 And because of phlegm (*kapha*) occur:

some diet. The parallel in AH Ut.33.28 = AS Ut.38.34 plainly reads du;tabhojana 'corrupted food' instead.

- 1. Extremely Excited (*atyānandā*),
- 2. Protuberant (karninī), and
- 3. & 4. two (*caraṇī*), and
 - 5. other Phlegmatic (*ślesmalā*).
- *7.2 And similarly there are other (kinds of morbid female reproductive system) involving all *doṣas*:
 - 1. Impotent (śaṇḍhī),
 - 2. With testicles (aṇḍīnī),
 - 3. two Huge ($mahat\bar{\imath}$),
 - 4. With a needle-like opening (sūcīvaktrā),
 - 5. (sarvātmikā).

Philological Notes Verses 5 and 6 consist of four hemistichs written in a kind of *triṣṭubh* metre — that is, of eight unequal *pāda*s containing 11 syllables each — and correspond to six hemistichs in *anuṣṭubh* in Su 1938 (Ut.38.6cd–9cd). By the standards of classical Sanskrit prosody, the metre in all four hemistichs is irregular. However, considering the wide range of metrical variations of the *triṣṭubh* permissible in Epic Sanskrit, the concerned verses can be considered to fall well within metrical norm. Based on the metrical analysis of a large sample of *triṣṭubh* passages in the *Mahābhārata*, Fitzgerald (2009: 108) postulated the following general metrical structure:

Table 2: Summary of table 3 in Fitzgerald 2009.

Our verses scan:

Table 3: Metrical structure of vss. Ut.38.5–6 in the Nepalese version of the *Suśrutasaṃ-hitā*.

Following Fitzgerald's hypothesis (Fitzgerald 2009: 99) formulated explicitly with regard to the *Mahābhārata* that "the more variable a *triṣṭubh* passage of the Mbh is, the older it is likely to be", one may speculate that the current passage in the Nepalese version may go back to an ancient textual layer that, at the

time when the hyparchetype of the Nepalese version was produced, was not yet fully "Sanskritized" and harmonized with the surrounding passages. Alternatively and, perhaps, less likely, vss. 5–6 of the Nepalese version could have been composed as an attempt to harmonize the text of the SS — that is, to recast the list of diseases originally written in *anuṣṭubh* into *triṣṭubh*.

Note that so far we have not come across any other examples of non-Classical metres used either in Su 1938 or in the Nepalese version.

- The Retaining (*udāvartā*) releases foamy menstrual blood (*rajas*) with pain. One should diagnose the Infertile (*vandhyā*) by the absence of menstrual blood (*ārtava*), and the ? (*utplutā*) by chronic pain. In the case of Flooded (*pariplutā*), there is an extreme appetite for sex.
- The Windy $(v\bar{a}tal\bar{a})$ is hard, stiff, afflicted by stabbing and pricking pain. And in four former types too, there are painful sensations $(vedan\bar{a})$ associated with the wind (anila).
- The Bloodloss ($lohitakṣay\bar{a}$) is the one that has blood that diminishes with a burning sensation. And the Vomiting ($v\bar{a}min\bar{\iota}$), flooded with menstrual blood (rajas), ejects the semen ($b\bar{\imath}ja$) in the flow. ²⁷⁴
- The Falling ($prasraṃsan\bar{\imath}$) protrudes, it is agitated, and delivery is hard. The Child-Murdress ($putraghn\bar{\imath}$) kills a well-established fetus because of flows of blood (rakta). ²⁷⁵

Philological Notes In 10ab, we introduced two minor corrections and deleted the final *anusvāras* in *prasraṃsanīṃ* and *duḥprajāyanīṃ* found in both MSS. In doing so, we effectively changed the Accusative ending to the Nominative ones. Apart from mere grammatical, that is, syntactic, reasons, we believe that it is possible to explain how this mistake could occur. Based on irregular forms of both *anusvāra* signs (that is, in MS Kathmandu KL 699 and MS Kathmandu NAK 5-333) at the end of *prasraṃsanīṃ*, and considering the fact that MS Kathmandu KL 699 is missing one syllable, we believe that both MSS could have faithfully copied

²⁷⁴ The exact force of srutau 'in the flow' remains unclear.

²⁷⁵ Note that our interpretation of the semantic value of the reduplication *sthitam sthitam* follows Dalhaṇa's comment: *sthitaṃ sthitaṃ grabhaṃ hanti, notpannamātram,* 'She kills a "*sthitaṃ sthitaṃ*" fetus, not the one that has just arisen.' Note, however, that from a strict Pāṇinian point of view, this reduplication can be used to indicate either a permanent or a repeated character of an action or propererty (Cf. A 8.1.4: *nityavīpsayoḥ*), thus 'always established' and 'repeatedly established' respectively. The second option seems contextually fitting as well and would point towards repeated miscarriage.

what initially was an insertion mark of their common ancestor. The addition of an *anusvāra* after *duḥprajāyanī*, on the other hand, is most likely deliberate and occured after the initial confusion between an insertion mark and *anusvāra* in order to smooth out the syntax.

If we are correct in thinking that the omission of one syllable in 10a was already present in the common ancestor of MS Kathmandu KL 699 and MS Kathmandu NAK 5-333, the question about the source of MS Kathmandu NAK 5-333's reading <u>samsramsate</u> arises. At the moment, it remains unclear to us whether the scribe of MS Kathmandu NAK 5-333 had access to further textual sources or whether he conjectured the text on his own. Note also that this hemistich is written in an uncommon type of <u>anuṣṭubh</u>, namely, a <u>ta-vipulā</u>. Note, furthermore, that a reding parallel to the Nepalese edition is found, for example, in Mādhavanidāna 64.6ab. Here, however, the text readds <u>sramsate ca</u>, which bring the metre back to a regular <u>anuṣṭubh</u>.

- The Choleric ($pittal\bar{a}$) has intense burning sensation ($d\bar{a}ha$) and inflammation ($p\bar{a}ka$). And in the case of the first four kinds as well,²⁷⁶ one should include the symptoms of choler (pitta).
- She overindulges in sex (*grāmyadharma*) because of excessive enjoyment (*a-tyānanda*) and dissatisfaction.²⁷⁷ And in the case of ? (*karṇinī*), from phlegm (*śleṣman*) and menstrual blood (*āṣṛk*) a protuberance (*karṇikā*) develops in the ? (*yoni*).
- During sexual intercourse (*maithuna*), the first ? ($caran\bar{i}$) is the one that surpasses the man.²⁷⁸ Because of frequent excessive intercourse, the semen ($b\bar{i}ja$)

²⁷⁶ The first four kinds are described in the preceding verses. They are (*lohitakṣayā*), (*vāminī*), (*prasraṃsanī*) and (*putraghnī*).

²⁷⁷ The syntax of 12ab differs from its parallel formulations beginning with 8ab. The most notable irregularity is that the concerned hemistich lacks the name of the described condition and, consequently, the Nominative subject of the short sentence. It seems likely, therefore, that the Ablative *atyānadāt* 'because of excessive enjoyment' is meant additionally to explain the reasons behind the specific name of the disease, that is Excessive Enjoyment (*atyānandā*).

²⁷⁸ Dalhaṇa's reports two readings of the hemistich (see the Philological Notes) and, accordingly, proposes two slightly different (though equally puzzling) explanations of the clause 'to surpass the man during sexual intercourse'. In the first variant (identical with the Nepalese version), he explains that during the intercourse, the vulva? (yoni) afflicted by the condition becomes bigger, i.e., swells: pūrvā caraṇī atiricyate maithunācaraṇe' dhikā bhavati. However, it remains unclear what syntactic role is ascribed to the Ablative of the word 'man' (puruṣāt). The second explanation is similarly unclear: puruṣāt pūrvam atiricyate, atyarthaṃ kaṇdūyata ity arthaḥ. Taken literally, it says that a woman afflicted by the particular condition is scratched excessively (or, perhaps, feels excessive itchiness). Madhukośa accepts

then does not stay in place.²⁷⁹

Philological Notes Note here that the reading of Ut.38.16ab printed in the Su 1938 is the one given by Dalhana as an alternative. The reading that he accepted in his main text (inferable from the text his commentary) must have been identical with Ut.38.13ab of the Nepalese version: *maitunetyādi/ pūrvā caranī atiricyate maithunācarane 'dhikā bhavati*

- Phlegmatic ($\acute{slesmala}$) female genitals (yoni) are slimy, tormented by itchiness and very cold. And in the first four types too, one should include symptoms of phlegm (kapha).
- In the case of ? (saṇḍhī),²⁸⁰ the mentrual blood (ārtava) and breasts are missing,²⁸¹ and during sex, it is rough to the touch.

 And the ? (yoni) of a juvenile woman, taken by a copulent man,²⁸² may become ? (andanī).²⁸³
 - Dalhaṇa's alternative reading as the main text of *Mādhavanidāna* 62.9ab. Accordingly, it assumes that the condition is called *a-caraṇā* and that it makes a woman in-capable of enjoying lovemaking so that she withdraws from it before the man (*acaraṇā' samyaṅmaithunācaraṇāt pūrvaṃ prathamaṃ puruṣād atiricyate viramati*).
- The syntactic structure of 13cd corresponds to that of 12ab, and, by the same token, it seems likely that the Ablative 'because of frequent excessive intercourse' (*aticaraṇāt*) is meant to explain the name of the condition, namely, Excessive Intercourse (*aticaranā*).
- 280 It is noteworthy that both MSS equally unambiguous in transmitting $sandh\bar{\iota}$ as the name of the condition here, and calling it $sandh\bar{\iota}$ in the list above (see verse 8). At the moment we preserve this orthographic variation in our provisional edition and in the translation. Note, furthermore, that in our printed sourses of the verse (Su 1938 and @@Mādhavanidāna@@) that condition is caleld $sand\bar{\iota}$.
- 281 From a strict grammatical point of view, the compound <code>naṣṭārtvastanaḥ</code> (as well as the uncompounded reading of H, <code>naṣṭārtavaḥ</code> stanaḥ) should mean 'breasts that lack menstrual blood'. At the moment, we cannot make any sense of this translation and follow the Su 1938 (<code>anartvastanā ṣaṇḍī</code>) and the <code>Mādhavanidāna</code> (MN 62.11: <code>anartavā</code> 'stanī ṣaṇḍī) in thinking that the intention of the author was to express that both the breasts and the mentrual blood of a woman afflicted with the particular condition are reduced. From a grammatical point of view, however, the <code>karmadhāraya</code> compound <code>ārtavastana</code> should be either singular neuter or dual masculine.
- 282 Both medieval commentators, Dalhaṇa and Śrīkaṇṭhadatta, explain that a 'copulent' is aneiphimism for a large penis. Cf. Dalhaṇa on SS.Ut.38.18: atikāyo bṛhatsādhano naraḥ and Śrīkaṇṭhadatta on MN 62.11: atikāyagrhītāyā mahāmehanena gṛhītāyaḥ.
- 283 Note that in the version of Su 1938, the condition aṇḍānī is called phalinī, or, according to a variant reading and its explanation offered by Dalhaṇa, aphalinī. @@MN@@ reads aṇḍalī and reports aṇḍiṇī as the reading of the MS 'ka'. Since the term presupposed by

- (*mahāyoniḥ*) is wide open and (*sūcīvaktrā*) is very closed. For those women who have all the symptoms,their genitals (*yoni*) have all the humours.
- And also in first four types, one observes the symptoms of all humours. These five types of incurable diseases of female genitalia (*yonivyāpat*) are diseases that arise from all the humours.

Philological Notes In this verse, we introduced a conjectural emendation and adopted the reading *sarvalinganidarśanam* instead of the variant *sarvalingānidarśanam* that is supported by both MSS. We have two reasons for doing so.

On the one hand, we think that the reading of the MSS is faulty. If parsed as sarvalingāni darśanam, we arrive at a faulty syntactic construction that we think is unlikely to occur in our text. The parsing sarvalinga-anidarśanam 'one does not observe the symptoms of all humours', on its turn, is possible to sustain from the point of syntax. However, it violates the repetitive structure of the section, which consists of (1) a set of verses describing specific symptoms of the four types of (yonivyāpat) associated with a particular humour, (2) a description of a general type of yonivyāpat caused by the particular humour, and (3) a statement that the general symptoms of the particular humour are observed in the case of the four specific types as well. This being the case, we expect that the current verse does exactly this.

On the other hand, our conjecture is supported by an external evidence of *Bhāvaprakāśa* Ma Ci 70.16 that reads *sarvalingasamutthānā sarvadoṣaprakopajā* | *catasṛṣv api cādyāsu sarvalinganidarśanam* ||

But in the case of the curable ones, the sequence beginning with oleation²⁸⁴ for each humour (dosa) is recommended. And one should especially administer an vaginal douche (uttarabasti) according to the instructions.²⁸⁵

Śrīkaṇṭhadatta was based on the primary nominal stem aṇḍa 'egg' (Cf.: aṇḍalī aṇḍavan niḥsrtā yoniḥ), it is more likely that he read either $aṇḍan\bar{\imath}$ or $aṇḍin\bar{\imath}$. Note, furthermore, that in Maithilī as well as in the modern Bengali script, letters n and l can be easily confused.

²⁸⁴ Commenting on this, Dalhaṇa says: "In this way one understands the following meaning: in the case of curable diseases of female genitals, one should first use the type of oleation that counters the particular humour and then apply therapeutic emesis etc." (etena yasya doṣasya yaḥ pratyanīkaḥ snehas tena snehena saṃsnehya tato vamanādīn sādhyāsv avacārayed ity arthaḥ)

²⁸⁵ SS Ci 37.10off. give a detailed account of the therapeutic procedure called *uttarabasti*. These verses also describe specific instruments and application methods that vary depending on the gender and age of the patient. Therefore, our translation 'vaginal douche' is called by the context. In other contexts, the same term could refer instead to smth. like 'urethral douche'.

- One should treat a female genital (*yoni*) that is rough, cold, rigid and lacking in sensation (*alpasparśa*) with pot-sweats (*kumbhīsveda*)²⁸⁶ filled with marsh water ($\bar{a}n\bar{u}podaka$).²⁸⁷
- One should also put spiced, cooked meats (*veśavāra*)²⁸⁸ mixed with sweet drugs in the vaginas (*yoni*). And the women should gently hold enough Country Mallow (*balā*) oil.
- One should also apply suitable types of lavage as well as vomiting. In diseases with burning sensations $(\bar{u} \cdot \bar{s} \bar{a})^{289}$ and heat $(co \cdot \bar{s} a)$, a physician should apply cold treatment that has been taught.
- 286 The term <code>kumbhīsveda</code> occurs several times in other āyurvedic works. Commenting on this verse, Dalhaṇa gives a detailed account of the procedure: "One should treat with <code>kumbhīsveda</code>, that is to say, one should prepare a pot filled with decoction made from wind-reducing substances such as meat of aquatic animals and those living in marshes, bury it in earth, prepare a bed above it, add to the decoction globules of iron stones? (<code>lauhapāṣāṇa</code>) melted in the fire, and treat the woman with the vapour (<code>bāṣpasveda</code>) that arises from that pot and is directed only to the region of female genitalia (<code>yoni</code>). However, others explain that one should take the heat that comes about when one adds water into the pot filled with meat of aquatic and marshy animals as well as substances reducing wind." (<code>kumbhīsvedaih</code>, <code>ānūpaudakamāṃsavātaghnadravyakvāthapūrnāṃ kumbhīṃ kṛtvā bhūmau nikhanya tadupari śayyāṃ saṃsthāpyāgnisantaptalauhapāṣāṇaguḍakān kvāthe nikṣipya tadutthitair bāṣpasvedair yonipradeśamātragāmibhir upacaret; anye tu kumbhīṃ vātaharadravyānūpaudakamāṃsapūrṇāṃ sajalāṃ kṛtvā pravṛttoṣmāṇaṃ gṛhṇīyād iti vyākhyānayanti/ 6.38.24ab (Su 1938: 669–670).)</code>
- Our translation "marsh water" corresponds to the Sanskrit -ānūpodaka-. In choosing this reading and its English rendering, we followed the Sanskrit text exactly as transmitted in the Nepalese sources. The notion of 'marsh water', though perhaps surprising to a modern reader, is well attested in the Classical Āyurveda (see, for example, Angermeier (2020: 74-76)). In SS.Sū.45.37-38, we find a threefold classification of water depending on the quality of the land that it is collected from. Among these three, we find the marsh water (ānūpaṃ vari) mentioned as the least favourable. The text of the SS as accepted by Dalhaṇa, on the other hand, reads -ānūpaudaka- '[animals] living in the marsh-land and water.' The medieval commentator explains the procedure accordingly. It needs to be noted that in the majority of North Indian scripts, the syllables -po- and -pau- differ from each other by a single stroke above the line, so that a simple scribal error can cause a change in either direction.
- 288 As Dalhaṇa points out here, *veśavāra* is defined in SS.1.46.365–6 as follows: "Meat, boneless and steamed, is again pounded on stony slab and cooked after mixing pippalī, śuṇṭhī, marica, jaggery and ghee. This is known as vesavāra (curry). Vesavāra is heavy, unctuous, promotes strength and allays disorders of vāta." (trl. PV Sharma, vol. 1, p. 530). *māṃsaṃ nirasthi susvinnaṃ punar dṛṣadi peṣitam | pippalīśuṇṭhimaricaguḍasarpiḥsamanvitam || aikadhyaṃ pācayet saṃyag vesavāra iti smṛtaḥ | vesavāro guruh snigdho balyo vātarujāpahaḥ ||*
- 289 In the provisional edition of the verse, we chose the reading $\bar{u}s\bar{a}$ that is preserved here by MS Kathmandu KL 699. Although MS Kathmandu NAK 5-333 transmits here a more common orthography of the word (namely, $us\bar{a}$), it attests to $\bar{u}s\bar{a}$ at another instance, in SS.Ci.2.22.

- A physician should fill a vagina (*yoni*) that has a bad smell or is slimy with powders prepared from the five astringent substances (*pañcakaṣāya*).²⁹⁰ And in such a case, the purifying agent is a decoction made from ingredients such as the royal tree (*rājavṛkṣa*).²⁹¹
- 26 ²⁹² One should slowly fill a vagina (*yoni*) that has vaginal worms (*yonikrimi*) with pastes made of purifying substances with cow urine and sea salt.
- Or, one may fill it with the paste of the Indian Nightshade (*bṛhatīphala*), having washed it with its liquid.²⁹³
 However, one should fill and fumigate it when itchy and numb.
- 28 Wicks with purifying substances should be administered in the case of (ka- $rnin\bar{\imath}$).
 - One should anoint the (*prasraṃsanī*) with ghee, sweat it and enter milk into it.
- 29 And then, a physician should cover it with (*veśavāra*) and make a bandage. And for each humour (*doṣa*), one should place/ prescribe SURĀRISTASAMĀM/N.
- 30cd One should also prescribe food mainly consisting of milk and meat broth.
 - The diseases (*doṣa*) of semen (*śukra*), menstrual blood (*ārtava*), breast-milk (*stanya*) and the diseases of chyle (*rasa*) have been explained, and the causes for impotence and the treatment of miscarriage.
 - And also the therapy has been stated for the diseases that affect a pregnant woman.
 - And a physician should treat the subsequent diseases of the ones who are

²⁹⁰ According to Dalhaṇa, the five astringent substances (pañcakaṣāya) are (nyagrodha), (udu-mbara), (plaksa), (aśvattha) and . (gardabhānda)

²⁹¹ Note that in translating this verse, we put a comma after *pūrayet*.

The condition *yonikrimi* seems to be virtually unknown in currently preserved āyurvedic literature. The term is neither recorded in V. Jośī and N. H. Jośī (1968) or found in any of the available electronic texts. As a matter of fact, the only occurrence of the term in an āyurvedic work we are aware of, is a footnote (!) that reports an alternative reading of Cakrapāṇidatta's commentary on CS Ci.30.18 (see Y. T. Ācārya (Ca. 1941: 635b)). Outside of medical literature, the Śabdakalpadruma records a quote from the Brahmavaivarttapurāṇa (śrīkṛṣṇajanmakhaṇḍe 83 adhyāyaḥ). Among other things, it describes the hardships that await a śūdra, who transgresses his dharma and has sex with a Brahmin woman or with his mother. After suffering for a hundred Brahma-years in the hell, he is damned for all times to reincarnate on earth among presumably some of the lowest and most wretched beings. So, for example, he will be reborn for seven times as a vaginal worm (yonikrimi) of prostitutes (yaḥ śūdro brāhmaṇīgāmī mātṛgāmī sa pātakī | ... yonikrimiḥ puṃścalīnāṃ sa bhavet saptajanmasu ||)

born afterwards.

Editions and Abbreviations

Ah 1939 Kuṃṭe, Aṇṇā Moreśvara, Navare, Kṛṣṇaśāstrī, and Parādkar, Hari-

śāstrī (1939) (eds.), श्रीमद्वाग्भटविरचितम् अष्टाङ्गहृदयम्, श्रीमद्रुणदत्तविर-चितया सर्वाङ्गसुन्दराख्यया व्याख्यया, हेमाद्विप्रणीतया आयुर्वेद्रसायनाहृया टी-कया च समुष्ठसितम् = The Astāngahṛidaya (6th edn., Muṃbayyām:

Nirnayasāgara Press), ark:/13960/t3tt6967d.

Anup Sanskrit Library (n.d.).
Anup Sanskrit Library (n.d.).

Apte Apte, Vaman Shivaram (1992), The Practical Sanskrit-English Dic-

tionary (Kyoto: Rinsen Book Company), ISBN: 4-653-00038-7; Re-

printed from Gode and Karve 1957-9.

AS Asiatic Society (n.d.).

As 1980 Āthavale, Anamta Dāmodara (1980) (ed.), Aṣṭāṅgasaṅgra-

haḥ. Śrīmad Vṛddhavāgbhaṭaviracitaḥ Induvyākhyāsahitaḥ (Pune: Maheśa Anamta Āthavale, Śrīmad Ātreya Prakāśanam),

ark:/13960/t9773bb9z.

Bhela 1921 Mookerjee, Ashutosh and Ananta Krishna Shastri, Vedantabis-

harad (1921) (eds.), *The Bhela Samhita. Sanskrit Text* (Calcutta: University of Calcutta), ark:/13960/t3sv3157j; Based on two copies made of the Thanjavur codex unicus (MS Thanjavur TMSSML 10773, Burnell 1880: 63–4, P. P. S. Sastri 1933: #11085).

Bhela 2000 Krishnamurthy, K. H. (2000), Bhela-samhitā. Text with English

Translation, Commentary and Critical Notes (Haridas Ayurveda

Series, 8; Varanasi: Chaukhambha Visvabharati).

BL British Library (n.d.).

Ca. 1941 Ācārya, Yādavaśarma Trivikrama (1941) (ed.), महर्षिणा पुनर्वसुनोपदि-

ष्टा, तच्छिष्येणाग्निवेशेन प्रणीता, चरकदृढबलाभ्यां प्रतिसंस्कृता चरकसंहिता, श्री-चक्रपाणिदत्तविरचितया आयुर्वेददीपिकाव्याख्यया संवलिता (3rd edn., Mum-

bayyāṃ: Nirnaya Sagara Press), url, accessed 01/01/2018.

HIML Meulenbeld, Gerrit Jan (1999–2002), A History of Indian Medical

Literature, 5 vols. (Groningen: E. Forsten), ISBN: 9069801248.

IOLR Eggeling, Julius et al. (1887–1935), *Catalogue of the Sanskrit Manuscripts in the Library of the India Office* (London: Secretary of State for India).

KL Kaiser Library (n.d.).

MW Monier-Williams, Monier, Leumann, E., Cappeller, C., et al. (1899),

A Sanskrit-English Dictionary Etymologically and Philologically

Arranged, New Edition (Oxford: Clarendon Press); 1970 reprint.

NAK National Archives of Kathmandu (n.d.).

NCC Raghavan, V. et al. (1949–), New Catalogus Catalogorum, an Alphabetical Register of Sanskrit and Allied Works and Authors, 39 vols. (Madras University Sanskrit Series; Madras: University of Madras); v.1: revised edition, 1968.

NGMCP (2014), 'Nepal-german Manuscript Cataloguing Project. Online Title List and Descriptive Catalogue', Universität Hamburg and Deutsche Forschungsgemeinschaft, URL.

NK Nadkarni, K. M. (1982a), Dr. K. M. Nadkarni's Indian Materia Medica, with Ayurvedic, Unani-tibbi, Siddha, Allopathic, Homeopathic, Naturopathic & Home Remedies, Appendices & Indexes ... in Two Volumes, ed. A. K. Nadkarni, 2 vols. (3 ed., revised and enlarged by A. K. Nadkarni, Bombay: Popular Prakashan), ISBN: 8171541429, URL.

RORI Rajasthan Oriental Research Institute (n.d.).

Su 1889 Bhaṭṭācāryya, Jīvānanda Vidyāsāgara (1889) (ed.), सुश्रुतः. सूत्र-निदान-शारीर-चिकित्सा-कल्पोत्तर-तन्त्र-किल्पत आयुर्वेद. भगवता धन्व-न्तरिणोपदिष्टः सुश्रुतनामधेयेन तच्छिष्येण विरचितः (3rd edn., Calcutta: Saratī Press), ark:/13960/t1nh6j09c; HIML:IB, 311, edition b.

Ācārya, Yādavaśarma Trivikrama (1915) (ed.), सुश्रुतसंहिता, सु-श्रुतेन विरचिता, वैद्यवरश्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया समुक्लिसता, आचार्योपाह्वेन त्रिविकमात्मजेन यादवशर्मणा संशोधिता = The Sushrutasamhita of Sushruta, the Nibandhasangraha Commentary of Shri Dalhaṇāchārya (Mumbayyāṃ: Nirṇayasāgaramudrāyantrālaye), ark:/13960/t3sv0mt50, accessed 29/07/2020; HIML: IB, 312 edition *v.

Ācārya, Yādavaśarma Trivikrama (1931) (ed.), सुश्रुतसंहिता, वैद्यव-रश्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया समुष्ठसिता, महर्षिणा सुश्रुतेन विरचिता, सूत्र-निदान-शारीर-चिकित्सा-कल्पस्थानोत्तरतन्त्रात्मकः. आचार्योपाह्वेन त्रिविकमात्मजेन यादवशर्मणा संशोधिता = The Sushrutasaṃhitā of Sushruta with the Nibandhasangraha Commentary of Shree Dalhaṇāchārya (2nd edn., Mumbayyāṃ: Pāṇḍuraṅga Jāvajī at the Nirṇayasāgaramudrāyantrālaye), ark:/13960/t9j41sg94, accessed 09/06/2020; HIML: IB, 312 edition *v.

Su 1938 Ācārya, Yādavaśarma Trivikrama and Ācārya, Nārāyaṇa Rāma (1938) (eds.), श्रीडल्हणाचार्यविरचितया निवन्धसंग्रहाख्यव्याख्यया निदानस्थानस्य श्रीगयदासाचार्यविरचितया न्यायचिन्द्रकाख्यपञ्जिकाव्याख्यया च समुल्लसिता महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता (3rd edn., Bombay: Nirṇayasāgara Press), ark:/13960/t09x0sk1h; HIML:IB, 313, edition cc ('the vulgate').

Su 1938² Ācārya, Yādavaśarma Trivikrama and Ācārya, Nārāyaṇa Rāma (2004) (eds.), महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता, श्रीडल्हणाचार्यविरचितया निवन्धसंग्रहाख्यव्याख्यया निदानस्थानस्य श्रीगयदासाचार्यविरचितया न्यायचन्द्रिकाख्यपञ्जिकाव्याख्यया च समुष्ठसिता (Vārāṇasī: Caukhambhā Krsnadāsa Akādamī); Reprint of the third, 1938 edition (Su 1938).

Su 1939 Ācārya, Yādavaśarma Trivikrama and Śarman, Nandakiśora (1939) (eds.), सुश्रुतसंहितायाः सूत्रस्थानम्. श्रीचक्रपाणिद्त्तिवरचितया भानुमत्तीव्याख्याया समेतम् = Sushrut-sañhitā (sūtra Sthān) with Bhānumatī Commentary by Chakrapāṇi Datta with Introduction by Gaṇanāth Sen (Śrīsvāmi Lakṣmīrāma Nidhi Granthamālā = Shrī Swāmī Lakshmī Rām Trust Series, 1; [Jaipur]: Śyāmasundara Śarman), ark:/13960/t54g0d12m; Printed at the Nirṇayasāgara Press, Bombay.

Su 1945 Ācārya, Yādavaśarma Trivikramācārya and Ācārya, Nārāyaṇa Rāma (1945) (eds.), महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता (मूलमात्रा). पाठान्तर-परिशिष्टादिभिः संविलता = the Suśrutasaṃhitā of Suśruta with Various Readings, Notes and Appendix etc. (Mumbāi: Nirṇayasāgarākhyamudraṇālaye), URL.

TMSSML Tanjore Maharaja Serfoji Saraswati Mahal Library (n.d.).

Viṣṇudh. Śarman, Madhusūdana and Śarman, Mādhavaprasāda (1912) (eds.), विष्णुधर्मोत्तरपुराणम् = [Viṣṇudharmottarapurāṇa] (Mumbai: Khemarāja Śrīkṛṣṇadāsa at the Śrīveṅkaṭeśvara Steam Press), ark:/13960/t6qz6fr23; Lithograph format. Edited on the basis of a manuscript belonging to the astrologer Śudhākaraśarman of the Varanasi Sanskrit Pāṭhaśālā.

Botanical Reference Works

ADPS Sivarajan, V. V. and Balachandran, Indira (1994), *Ayurvedic Drugs and Their Plant Sources* (New Delhi, Bombay, Calcutta: Oxford & IBH Publishing).

AVS Warrier, P. K., Nambiar, V. P. K., and Ramankutty, C. (1994–6) (eds.), Indian Medicinal Plants: A Compendium of 500 Species. Vaidyaratnam P. S. Varier's Arya Vaidya Sala, Kottakal (Madras: Orient Longman).

CIPP Pillay, V. V. (2010), 'Common Indian Poisonous Plants', in D. A. Warrell, T. M. Cox, and J. D. Firth (eds.), *Oxford Textbook of Medicine* (5th edn., Oxford University Press), 1371–5. DOI: 10.1093/med/9780199204854.003.090302.

Dutt, Uday Chand (1922), *The Materia Medica of the Hindus...with a Glossary of Indian Plants by George King. Revised Edition...by Binod Lall Sen and Ashutosh Sen and Pulin Krishna Sen* (Krishnadas Sanskrit Studies; 3rd edn., Calcutta: Madan Gopal Dass for the Adi-Ayurveda Machine Press), URL, accessed 04/10/2017; Reprinted Varanasi: Chowkhamba Saraswatibhavan, 1980.

GIMP Chopra, R. N., Nayar, S. L., and Chopra, I. C. (1956), *Glossary of Indian Medicinal Plants* (3rd reprint, 1992, New Delhi: Council of Scientific and Industrial Research); vol. 2: R. N. Chopra, I. C. Chopra, and Varma (GIMP suppl.).

GIMP suppl. Chopra, R. N., Chopra, I. C., and Varma, B. S. (1969), *Supplement to Glossary of Indian Medicinal Plants* (Reprint 1986, New Delhi: National Institute of Science Communication), ISBN: 8185038872.

GVDB Singh, Thakur Balwant and Chunekar, K. C. (1972), Glossary of

Vegetable Drugs in Brhattrayī (Varanasi: Chowkhamba Sanskrit

Series Office).

IGP Griffiths, Mark (1994), The New Horticultural Society Index of

Garden Plants (London: Macmillan).

Index of Manuscripts

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

Bikaner Anup 4390: 5 London BL H. T. Colebrooke 908: 7

Bikaner RORI 5157: 33

Cambridge Add. 1693: 29 Mumbai AS B.D.109: 5 Mumbai AS B.I.3: 5

Kathmandu KL 699: 20, 32, 66, 71f, 75

Kathmandu NAK 1-1079: 12, 20 NAK 5-333: 45 Kathmandu NAK 5-333: 7, 9, 12, 20, 29, 34,

71f, 75 Thanjavur TMSSML 10773: 78

References

Ācārya, Yādavaśarma Trivikrama (1941) (ed.), महर्षिणा पुनर्वसुनोपदिष्टा, तच्छिष्येणाग्नि-वेशेन प्रणीता, चरकदृढबलाभ्यां प्रतिसंस्कृता चरकसंहिता, श्रीचकपाणिदत्तविरचितया आयुर्वे-द्दीपिकाव्याख्यया संविलता (3rd edn., Mumbayyāṃ: Nirnaya Sagara Press), URL, accessed 01/01/2018.

Ācārya, Yādavaśarma Trivikramācārya and Ācārya, Nārāyaṇa Rāma (1945) (eds.), महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता (मूलमात्रा). पाठान्तर-परिशिष्टादिभिः संविलता = the Suśrutasaṃhitā of Suśruta with Various Readings, Notes and Appendix etc. (Mumbāi: Nirṇayasāgarākhyamudraṇālaye), URL.

Adriaensen, Rob, Barkhuis, Roelf, and Ruijters, Jean-Louis (1984), 'An English Translation of Suśrutasaṃhitā, Nidānasthāna 1, 1–39, Together with Gayadāsa's Nyāyacandrikā', in Gerrit Jan Meulenbeld (ed.), *Proceedings of the International Workshop on Priorities in the Study of Indian Medicine* (Groningen: Forsten), 277–310.

- Adriaensen, Rob C. R., Barkhuis, Roelf, and Ruijters, Jean-Louis (1984), 'An English Translation of Suśrutasaṃhitā, Nidānasthāna 1, 1–39, Together with Gayadāsa's Nyāyacandrikā', in Gerrit Jan Meulenbeld (ed.), *Proceedings of the International Workshop on Priorities in the Study of Indian Medicine* (Groningen: Forsten), 277–310.
- Agrawala, V. S. (1963), *India As Known to Pāṇini: A Study of the Cultural Material in the Aṣṭādhyāyī* (2nd edn., Varanasi: Prthvi Prakashan); First published in 1953.
- Angermeier, Vitus (2020), Regenzeiten, Feuchtgebiete, Körpersäfte. Das Wasser in der klassischen indischen Medizin (Wien: Österreichische Akademie der Wissenschaften).
- Baber, Zaheer (1996), *The Science of Empire: Scientific Knowledge, Civilization, and Colonial Rule in India* (Albany: State University of New York Press).
- Bakker, Hans T. (2019), 'Some Methodological Considerations with Respect to the Critical Edition of Puranic Literature', in *Holy Ground: Where Art and Text Meet* (Leiden: Brill), 175–84. DOI: 10.1163/9789004412071_010.
- Barceloux, Donald G. (2008), Medical Toxicology of Natural Substances. Foods, Fungi, Medicinal Herbs, Plants, and Venomous Animals (Hoboken, NJ, etc.: John Wiley & Sons), 1196 pp., ISBN: 047172761X, URL.
- Bausi, Alessandro et al. (2015), Comparative Oriental Manuscript Studies. An Introduction (Hamburg: Tredition). DOI: 10.5281/ZENOD0.46784.
- Bendall, Cecil (1883), Catalogue of the Buddhist Sanskrit, Manuscripts in The, University Library, Cambridge: With Introductory Notices and Illustrations of the Palaeography and Chronology of Nepal and Bengal (Cambridge: University Press), ark:/13960/t03x8vz7b.
- Bhaṭṭācārya, Candrakānta (1910-7) (ed.), सुश्रुतसंहिता प्रथमखण्डम् सूत्रस्थानात्म-कम् हाराणचन्द्रचक्रवर्तिकविराजविरचितसुश्रुतार्थसन्दीपनभाष्य-समेतम्...चन्द्रकान्त भट्टाचार्य्य-प्रमुखेः संशोधितम् = [The Suśrutasaṃhitā with the Commentary Suśrutārthasandīpanabhāṣya by Hārāṇacandra Cakravarti] (Kalikātā: Satya Press); Edition "t" in HIML: IB, 312.
- Bhattarai, Bidur (2020), Dividing Texts. Conventions of Visual Text-Organisation in Nepalese and North Indian Manuscripts (Studies in Manuscript Cultures; Berlin/Boston: de Gruyter), 388.

- Birch, Jason, Wujastyk, Dominik, Klebanov, Andrey, Parameswaran, Madhu K., et al. (2021), 'Further Insight into the Role of Dhanvantari, the Physician to the Gods, in the Suśrutasamhitā', *Academia Letters*. DOI: 10.20935/AL2992.
- Birch, Jason, Wujastyk, Dominik, Klebanov, Andrey, Rimal, Madhusudan, et al. (2021), 'Dalhaṇa and the Early 'Nepalese' Version of the Suśrutasaṃhitā'. DOI: 10.20935/a13733.
- Bollée, Willem (2010), 'Remarks on the Cultural History of the Ear in India', in Nalini Balbir (ed.), *Svasti: Essays in Honour of Professor Hampa Nagarajaiah for His 75th Birthday* (Bangalore: K. S. Mudappa Smaraka Trust), 141–67, URL, accessed 23/01/2022.
- Breton, P. (1826), 'On the Native Mode of Couching', *Transactions of the Medical and Physical Society of Calcutta*, 2: 341–82, ark:/13960/t3dz8nn5t, URL, accessed 02/06/2021.
- Bronkhorst, Johannes (2016), How the Brahmins Won: From Alexander to the Guptas (Leiden: Brill). DOI: 10.1163/9789004315518.
- (2021), 'Patañjali's Āryāvarta = Śuṅga realm?', *Academia Letters.* DOI: 10 . 20935/a1291; Article 291.
- Bronner, Yigal (2021) (ed.), 'The Pandit Project' (30 Sept.), URL.
- Burghart, Marjorie (2016), 'The TEI Critical Apparatus Toolbox: Empowering Textual Scholars through Display, Control, and Comparison Features', *Journal of the Text Encoding Initiative*, 10/Issue 10. DOI: 10.4000/jtei.1520, URL, accessed 12/12/2017.
- —— (2017), 'Textual Variants', in Marjorie Burghart, James Cummings, and Elena Pierazzo (eds.), *Digital Editing of Medieval Texts: A Textbook* (DEMM), URL, accessed 04/07/2021.
- Burnell, Arthur Coke (1880), *A Classified Index to the Sanskrit Mss. in the Palace at Tanjore* (London: Trübner), ark:/13960/t4xh86j61; Bhelasamhitā described on pp. 67 ff.
- Carpue, J. C. (1816), An Account of Two Successful Operations for Restoring a Lost Nose from the Integuements of the Forehead...Including Descriptions of the Indian and Italian Methods (London: Longman et al.), ark:/13960/t2q57fn42, accessed 20/03/2019.
- Cone, Margaret (2001), *A Dictionary of Pāli* (Oxford: The Pali Text Society), ISBN: 0 86013 394 x.

- Cordier, P. (1903), 'Récentes découvertes de mss. médicaux sanscrits dans l'Inde (1898–1902)', *Muséon, Nouvelle Série*, 4: 321–52, ark:/13960/t26b2j457, accessed 02/01/2020; Reprinted in Roşu 1989: 539–70.
- Coult, Ro. (1731), 'An Account of the Diseases of Bengall', in *Indian Science and Technology in the Eighteenth Century* (Impex India), 141 f., 276.
- Crawford, D. G. (1930), *Roll of the Indian Medical Service*, 1615–1930 (London, Calcutta, Simla: Thacker).
- Das, Rahul Peter (2003), *The Origin of the Life of a Human Being. Conception and the Female According to Ancient Indian Medical and Sexological Literature* (Indian Medical Tradition; Delhi: Motilal Banarsidas), ISBN: 81-208-1998-5.
- Dave, K. N. (1985), *Birds in Sanskrit Literature* (Delhi: Motilal Banarsidass), ISBN: 0-89581-676-8, ark:/13960/t2c94cv80.
- Deshpande, Vijaya (1999), 'Indian Influences on Early Chinese Ophthalmology: Glaucoma As a Case Study', *Bulletin of the School of Oriental and African Studies*, 62: 306–22. DOI: 10.1017/S0041977X00016724.
- (2000), 'Ophthalmic Surgery: A Chapter in the History of Sino-indian Medical Contacts', *Bulletin of the School of Oriental and African Studies*, 63/3: 370–88, ISSN: 0041-977X. DOI: 10.1017/s0041977x00008454.
- Dimitrov, Dragomir and Tamot, Kashinath (2007), 'Kaiser Shamsher, His Library and His Manuscript Collection', *Kaiser Shamsher, His Library and His Manuscript Collection*, 3 (Jan.): 26–36, URL.
- Edgerton, Franklin (1939), 'The Epic Trisṭubh and Its Hypermetric Varieties', *Journal of the American Oriental Society*, 59/2: 159–74. DOI: 10.2307/594060.
- —— (1953), Buddhist Hybrid Sanskrit Grammar and Dictionary. Vol. 2: Dictionary (William Dwight Whitney Linguistic Series; New Haven: Yale University Press).
- Eggeling, Julius et al. (1887–1935), Catalogue of the Sanskrit Manuscripts in the Library of the India Office (London: Secretary of State for India).
- Elliot, Robert Henry (1918), The Indian Operation of Couching for Cataract: Incorporating the Hunterian Lectures Delivered before the Royal College of Surgeons of England on February 19 and 21, 1917 (London: H. K. Lewis).
- Emeneau, M. B. (1969), 'Sanskrit Syntactic Particles "kila, khalu, nūnam"', *Indo-Iranian Journal*, 11/4: 241–68.

- Falk, Harry (1991), 'Silver, Lead and Zinc in Early Indian Literature', *South Asian Studies*, 7/1: 111–7. DOI: 10.1080/02666030.1991.9628430.
- Fan, Ka Wai (2005), 'Couching for Cataract and Sino-indian Medical Exchange From the Sixth to the Twelfth Century Ad', *Clinical and Experimental Ophthalmology*: 188–90. DOI: 10.1111/j.1442–9071.2005.00978.x; Unaware of Deshpande 1999; 2000.
- Fitzgerald, James L. (2009), 'A Preliminary Study of the 681 Triṣṭubh Passages of the Mahābhārata', in Robert P. Goldman and Muneo Tokunaga (eds.), *Epic Undertakings* (Papers of the 12th World Sanskrit Conference; Delhi: Motilal Banarsidass Publishe), 95–117.
- Gaṇapatiśāstrī, T. (1920–5), Āryamañjuśrīmūlakalpaḥ (Trivandrum Sanskrit Series, 70; Anantaśayane: Rājakīyamudraṇayantrālaye), ark :/ 13960 / t4pk5sj0j.
- Gode, P. K. and Karve, C. G. (1957–9) (eds.), Revised and Enlarged Edition of Prin. V. S. Apte's the Practical Sanskrit-English Dictionary (Poona: Prasad Prakashan), ark:/13960/t3gx47212, accessed 20/10/2017.
- Gombrich, Richard (1979), "He cooks softly': dverbs in Sanskrit grammar', *Bulletin of the School of Oriental and African Studies*, 42/2 (June): 244–56. DOI: 10.1017/s0041977x0014580x.
- Gupta, Sri Madhusudana (1835–6) (ed.), *Āyur-veda-prakāśa [also Called Suśruta-saṃhitā] by Suśruta. the Suśruta, or System of Medicine, Taught by Dhanwantari, and Composed by His Disciple Suśruta*, 2 vols. (Calcutta: Education Press and Baptist Mission Press), ark:/13960/t6841qw6x.
- Harimoto, Kengo (2011), 'In Search of the Oldest Nepalese Manuscript', *Rivista degli Studi Orientali*, 84/1–4: 85–106, ISSN: 0392-4866, URL, accessed 08/09/2019.
- (2014), 'Nepalese Manuscripts of the Suśrutasaṃhitā', *Journal of Indian and Buddhist Studies (Indogaku Bukkyogaku Kenkyu)*, 62/3: 23–29 (1087-1093). DOI: 10.4259/ibk.62.3_1087, URL, accessed 08/09/2019.
- (pre-published), '[Preliminary Edition of the Nepalese MSS of the Suśruta-saṃhitā, adhyāyas 1.1–3, 6.4]'; Unpublished document dated 2010.
- Hayashi, Takao (2017), 'The Units of Time in Ancient and Medieval India', *History of Science in South Asia*, 5/1: 1–116. DOI: 10.18732/h2ht0h.

- Hemarāja Śarman (1938) (ed.), काश्यपसंहिता (वृद्धजीवकीयं तन्त्रं वा) महर्षिणा मारीचक-श्यपेनोपदिष्टा ... हेमराजशर्मणा लिखितेन विस्तृतेन उपोद्धातेन सहिता ... सत्यपाल भिषगा कृतया विद्योतिनी हिन्दीव्याख्यया ... समुष्ठसिता (1st edn., Mumba: Nirṇayasāgara Press), URL, accessed 02/02/2018.
- Hendley, T. Holbein (1895), A Medico-topographical Account of Jeypore, Based on the Experience of Twenty Years' Service As a Residency Surgeon and Thirteen As Superintendent of Dispensaries at Jeypore, Rajputana (Calcutta: Calcutta Central Press Company).
- Hessler, Franciscus (1844–55), Suśrutas Ayurvédas: id est Medicinae Systema a Venerabili D'hanvantare Demonstratum a Susruta Discipulo Compositum; Nunc Primum Ex Sanskrita in Latinum Sermonem Vertit, Introductionem, Annotationes Et Rerum Indice Franciscus Hessler (Erlangen: Ferdinandum Enke), URL, accessed 04/11/2017.
- Hoernle, A. F. Rudolf (1893–1912) (ed.), *The Bower Manuscript: Facsimile Leaves, Nagari Transcript, Romanised Transliteration and English Translation with Notes* (New Imperial Series, 22; Calcutta: Government of India and under the patronage of the Bengali Government, Archaeological Survey of India), ark:/13960/t05z1bg4q.
- (1897), Suśrutasaṃhitā = The Suçruta-Saṃhitā or the Hindū System of Medicine According to Suçruta Translated from the Original Sanskrit (Bibliotheca Indica, 911; Calcutta: Asiatic Society), ark:/13960/t8pd1kw9r, accessed 03/01/2018; No more published; Hoernle does not state which edition he is translating, but it includes the "Dhanvantari phrase".
- (1906a), 'Studies in Ancient Indian Medicine I: The Commentaries on Su-śruta', Journal of the Royal Asiatic Society of Great Britain and Ireland: 283–302, URL, accessed 26/06/2019.
- —— (1906*b*), 'Studies in Ancient Indian Medicine II: On Some Obscure Anatomical Terms', *Journal of the Royal Asiatic Society of Great Britain and Ireland*, 4: 915–41, URL, accessed 25/06/2019.
- (1907*a*), 'Studies in Ancient Indian Medicine II: On Some Obscure Anatomical Terms (Continued from the the Journal, 1906, p. 941)', *Journal of the Royal Asiatic Society of Great Britain and Ireland*: 1–18, URL, accessed 25/06/2019.
- —— (1907b), Studies in the Medicine of Ancient India: Osteology or the Bones of the Human Body (Oxford: Clarendon Press), ark:/13960/t1pg9cq8b.

- Hofer, Theresia (2007), 'Swami Laxmi Ram's Ayurvedic Pharmacy in Jaipur, India', *Wellcome History*, 34: 2–3, URL, accessed 01/07/2021.
- Holwell, J. Z. (1767), An Account of the Manner of Inoculating for the Small Pox in the East Indies With...Observations on The...Mode of Treating That Disease in Those Parts (London: T. Becket & P. A. de Hondt), ark:/13960/t3ws9h63c.
- Jack, David Morton (1884), 'A Thesis on Cataract in India: Its Pathology and Treatment', Wellcome Library, London, MS.3007, URL, accessed 02/06/2021.
- Jośī, Veṇīmādhavaśāstrī and Jośī, Nārāyaṇa Harī (1968), Āyurvedīya Mahākośaḥ arthāt Āyurvedīya Śabdakośaḥ Saṃskṛta—Saṃskṛta (Muṃbaī: Mahārāṣṭra Rājya Sāhityta āṇi Saṃskṛti Maṃḍaḷa), URL.
- Kangle, R. P. (1969), *The Kauṭilīya* Arthaśāstra (2nd edn., Delhi: Motilal Banarsidass), ISBN: 81-208-0042-7, ark:/13960/t3gz6qh1s, accessed 23/09/2021.
- Keith, Arthur Berriedale (1908), review of A. F. Rudolf Hoernle (1907), 'Studies in Ancient Indian Medicine II: On Some Obscure Anatomical Terms (Continued from the the Journal, 1906, p. 941)', Journal of the Royal Asiatic Society of Great Britain and Ireland: 1–18, URL, accessed 25/06/2019, in Zeitschrift Der Deutschen Morgenländischen Gesellschaft, 1/62: 134–9, URL, accessed 17/04/2021.
- Klebanov, Andrey (2010), 'The *Nepalese Version of the Suśrutasaṃhitā and Its Interrelation with Buddhism and the Buddhists', MA thesis (Hamburg: Hamburg University, Sept.), URL, accessed 08/09/2019.
- —— (2021a), 'On the Textual History of the Suśrutasaṃhitā (1): A Study of Three Nepalese Manuscripts', *eJIM: Electronic Journal of Indian Medicine*, 12/1: 1–64. DOI: 10.21827/ejim.12.1.37385.
- —— (2021b), 'On the Textual History of the Suśrutasaṃhitā, (2): An Anonymous Commentary and its Identified Citations', in Toke Lindegaard Knudsen, Jacob Schmidt-Madsen, and Sara Speyer (eds.), *Body and Cosmos: Studies in Early Indian Medical and Astral Sciences in Honor of Kenneth G. Zysk* (Leiden, Boston: Brill), 110–39.
- Kuist, James M. (1982), The Nichols File of The Gentleman's Magazine (Madison: University of Wisconsin Press), ISBN: 0-299-08480-9, ark:/13960/t53g2ct2z.
- Lariviere, Richard W. (2003), *The Nāradasmṛti. Critically Edited with an Introduction, annotated Translation, and Appendices* (2nd edn., Delhi: Motilal Banarsidass), ISBN: 8120818040; First edition: Philadelphia, 1989.

- Leffler, Christopher T. et al. (2020), 'The History of Cataract Surgery: From Couching to Phacoemulsification', *Annals of Translational Medicine*, 8/22: 1551–97, ISSN: 2305-5847. DOI: 10.21037/atm-2019-rcs-04, URL, accessed 02/11/2020.
- Lienhard, Siegfried (1978), 'On the Meaning and Use of the Word Indragopa', *Indologica taurinensia*, 6: 177–88, URL, accessed 06/02/2021; The indragopa is a 'red velvet mite'.
- Longmate, Barak (1794), 'A Curious Chirurgical Operation', *The Gentleman's Magazine and Historical Chronicle*, 64.4 (Oct.): 883, 891, 892; I am grateful to the late John Symons of the Wellcome Library who identified the author 'B. L.' as the journalist Barak Longmate. See also Kuist 1982: 87.
- Majno, Guido (1975), *The Healing Hand. Man and Wound in the Ancient World* (Cambridge, MA: Harvard University Press), URL, accessed 26/08/2021.
- Malamoud, Charles (1996), 'Paths of the Knife: Carving up the Victim in Vedic Sacrifice', in *Cooking the World: Ritual and Thought in Ancient India. Translated from the French by David White* (Delhi, Bombay, etc.: Oxford University Press), 169–80.
- Manucci, Niccolò (1907–8), Storia Do Mogor or, Mogul India, 1653–1708 by Niccolao Manucci, Venetian; Translated with Introduction and Notes, by William Irvine (The Indian Texts Series; London: J. Murray), URL, accessed 04/10/2021.
- Masai, François (1950), 'Principes et conventions de l'édition diplomatique', *Scriptorium*, 4: 177–93. DOI: 10.3406/scrip.1950.2294.
- Mayrhofer, Manfred (1953–72), Kurzgefaßtes etymologisches Wörterbuch des Altindoarischen; a Concise Etymological Sanskrit Dictionary (Heidelberg: Carl Winter, Universitätsverlag).
- (1986–2001), *Etymologisches Wörterbuch des Altindoarischen* (Heidelberg: Carl Winter, Universitätsverlag), ISBN: 3-533-03826-2.
- McHugh, James (2021), *An Unholy Brew: Alcohol in Indian History and Religions* (New York: Oxford University Press), 416 pp., ISBN: 9780199375936, URL.
- Meulenbeld, Gerrit Jan (1974), *The Mādhavanidāna and Its Chief Commentary: Chapters 1–10. Introduction, Translation, and Notes* (Leiden: Brill), ISBN: 978-90-04-03892-9; Meulenbeld provided a supplement to his 1974 listing of plant identities as an appendix in Das 2003.

- Meulenbeld, Gerrit Jan (1984), 'The Surveying of Sanskrit Medical Literature', in id. (ed.), *Proceedings of the International Workshop on Priorities in the Study of Indian Medicine* (Groningen: Forsten), 37–56.
- —— (1989), 'The Search for Clues to the Chronology of Sanskrit Medical Texts As Illustrated by the History of Bhaṅgā (cannabis Sativa Linn.)', *Studien zur Indologie und Iranistik*, 15: 59–70.
- (1992), 'The Characteristics of a Doṣa', Journal of the European Āyurvedic Society, 2/1: 1–5, URL, accessed 31/08/2021.
- (2008), The Mādhavanidāna with "Madhukośa," the Commentary by Vijayarakṣita and Śrīkaṇṭhadatta (Ch. 1-10). Introduction, Translation, and Notes (Delhi: Motilal Banarsidass); Meulenbeld provided a supplement to his 1974 listing of plant identities as an appendix in Das 2003.
- —— (2011), 'The Relationships between Doṣas and Dūṣyas: A Study on the Meaning(s) of the Root Murch-/mūrch', eJournal of Indian Medicine, 4/2: 35–135, URL, accessed 13/10/2017.
- Miles, M. (1999), 'Personal Communication', Mar.; Letter of 4 March.
- Moureau, Sébastien. (2015), 'The Apparatus Criticus', in Alessandro Bausi et al. (eds.), *Comparative Oriental Manuscript Studies: An Introduction* (Hamburg: Tredition), 348–52, ISBN: 978-3-7323-1768-4, URL, accessed 04/07/2021.
- Mukhopādhyāya, Girindranāth (1913), The Surgical Instruments of the Hindus, with a Comparative Study of the Surgical Instruments of the Greek, Roman, Arab, and the Modern Eouropean (sic) Surgeons (Calcutta: Calcutta University), ark: 13960 / t1zd2pq29, accessed 29/01/2018; Vol.2: ark:/13960/t9r25qd8m. Reprinted as a single volume, New Delhi, 1987.
- Nadkarni, K. M. (1954), Dr. K. M. Nadkarni's Indian Materia Medica, with Ayurvedic, Unani-tibbi, Siddha, Allopathic, Homeopathic, Naturopathic & Home Remedies, Appendices & Indexes ... in Two Volumes, ed. A. K. Nadkarni, 2 vols. (3 ed., revised by A. K. Nadkarni, Bombay: Popular Prakashan), ark:/13960/t6rz4h160.
- —— (1982a), Dr. K. M. Nadkarni's Indian Materia Medica, with Ayurvedic, Unanitibbi, Siddha, Allopathic, Homeopathic, Naturopathic & Home Remedies, Appendices & Indexes ... in Two Volumes, ed. A. K. Nadkarni, 2 vols. (3 ed., revised and enlarged by A. K. Nadkarni, Bombay: Popular Prakashan), ISBN: 8171541429, URL.

- Nadkarni, K. M. (1982b), Dr. K. M. Nadkarni's Indian Materia Medica, with Ayurvedic, Unani-tibbi, Siddha, Allopathic, Homeopathic, Naturopathic & Home Remedies, Appendices & Indexes ... in Two Volumes, ed. A. K. Nadkarni, 2 vols. (3 ed., revised and enlarged by A. K. Nadkarni, Bombay: Popular Prakashan), ISBN: 8171541429, URL.
- Narayana, Ala and Thrigulla, Saketh Ram (2011), 'Tangible Evidences of Surgical Practice in Ancient India', *Journal of Indian Medical Heritage*, 16: 1–18, URL, accessed 02/06/2021.
- NGMCP (2014), 'Nepal-german Manuscript Cataloguing Project. Online Title List and Descriptive Catalogue', Universität Hamburg and Deutsche Forschungsgemeinschaft, URL.
- Oberlies, Thomas (2003), *A Grammar of Epic Sanskrit* (Indian Philology and South Asian Studies, 5; Berlin: De Gruyter), ISBN: 9783110144482. DOI: 10.1515/9783110899344.
- Olivelle, Patrick (2005), Manu's Code of Law: A Critical Edition and Translation of the Manava-dharmasastra, With the editorial assistance of Suman Olivelle (South Asia research; New York: Oxford University Press), ISBN: 0195171462.
- (2013), King, Governance, and Law in Ancient India: Kauṭilya's Arthaśāstra. a New Annotated Translation (New York: Oxford University Press), ISBN: 9780199891825. DOI: 10.1093/acprof:osobl/9780199891825.003.0001.
- Osbaldeston, Tess Anne and Wood, R. P. A. (2000), Dioscorides. De Materia Medica. Being an Herbal with Many Other Medicinal Materials Written in Greek in the First Century of the Common Era. a New Indexed Version in Modern English [Introductory Notes by R. P. Wood] (Johannesburg: IBIDIS Press), ISBN: 0-620-23435-0, URL.
- Pandey, Anshuman (2012), 'Proposal to Encode the Newar Script in ISO/IEC 10646', URL.
- Pass, Gregory (2003), Descriptive Cataloging of Ancient, Medieval, Renaissance, and Early Modern Manuscripts (Chicago: American Library Association), ISBN: 0-8389-8218-2, URL.
- Pillay, V. V. (2013), *Modern Medical Toxicology* (New Delhi: Jaypee Brothers Pvt. Ltd), ISBN: 9789350259658.
- Pillay, Vijay V. and Sasidharan, Anu (2019), 'Oleander and Datura Poisoning: An Update', *Indian Journal of Critical Care Medicine*, 23/Supplement 4: 5250-5. DOI: 10.5005/jp-journals-10071-23302.

- Preisendanz, Karin (2007), 'The Initiation of the Medical Student in Early Classical Āyurveda: Caraka's Treatment in Context', in Birgit Kellner et al. (eds.), *Pramāṇakīrtiḥ. Papers Dedicated to Ernst Steinkellner on the Occasion of His 70th Birthday. Part 2*, ii, 2 vols. (Wiener Studien zur Tibetologie und Buddhismuskunde, 70.2; Wien: Arbeitskreis für Tibetische Und Buddhistische Studien Universität Wien), 629–68, ISBN: 9783902501097, URL.
- Price, Kenneth M. (2013), 'Electronic Scholarly Editions', in Ray Siemens and Susan Schreibman (eds.), *A Companion to Digital Literary Studies* (Chichester, UK: John Wiley & Sons, Ltd), 434–50. DOI: 10.1002/9781405177504.ch24, URL, accessed 04/07/2021.
- Rai, Saurav Kumar (2019), 'Invoking 'Hindu' Ayurveda: Communalisation of the Late Colonial Ayurvedic Discourse', *The Indian Economic & Social History Review*, 56/4: 411–26. DOI: 10.1177/0019464619873820; Online first.
- Rama Rao, B. et al. (2005), *Sanskrit Medical Manuscripts in India* (New Delhi: Central Council for Research in Ayurveda & Siddha), ark:/13960/t88h7763b.
- Rây, Priyadaranjan, Gupta, Hirendra Nath, and Roy, Mira (1980), *Suśruta Samhita* (a Scientific Synopsis) (New Delhi: Indian National Science Academy), ark:/13960/t64511t6v, accessed 13/09/2019.
- Rhys Davids, Thomas William and Stede, William (1921–5), *The Pali Text Society's Pali-English Dictionary* (London: The Pali Text Society), URL.
- Rimal, Madhusudana and Wujastyk, Dominik (2022), 'MS Kathmandu NAK 1/1146', Pandit Project (18 May), URL.
- Roşu, Arion (1989), *Un demi-siècle de recherches āyurvédiques. Gustave Liétard et Palmyr Cordier: Travaux sur l'histoire de la médecine indienne* (Paris: Institut de Civilisation Indienne).
- Saha, Mridula (2015), *The History of Indian Medicine Based on the Vedic Literature Satapatha Brahmana* (Kolkata: The Asiatic Society), ISBN: 978-9381574294.
- Sastri, Hrishikesh and Gui, Siva Chandra (1895–1917), *A Descriptive Catalogue of Sanskrit Manuscripts in the Library of Calcutta Sanskrit College* (Calcutta: Baptist Mission Press).
- Sastri, P. P. S. (1933), A Descriptive Catalogue of the Sanskrit Manuscripts in the Tanjore Maharaja Serfoji's Sarasvati Mahal Library Tanjore: Natya, Sangita, Kamasastra, Vaidya & Jyotisa, nos. 10650 11737 (Srirangam: Sri Vani Vilas Press), ark:/13960/t3nw8bc12.

- Śāstrī, Vardhamāna Pārśvanātha (1940) (ed.), उग्रादित्याचार्यकृत कल्याणकारक (राष्ट्रभा-षानुवादसिंहत) = The Kalyāṇa-kārakam of Ugrādityacharya, Edited with Introduction, Translation, Notes, Indexes and Dictionary (Sakhārāma Nemacaṃda Graṃthamālā, 129; Solāpura: Seṭha Goviṃdajī Rāvajī Dośī), ark:/13960/t2q617g4d.
- Scott, H. (1817), 'Some Remarks on the Arts of India, with Miscellaneous Observations on Various Subjects', *Journal of Science and the Arts*, 2: 67–72, ill. after 133, ark:/13960/t9870jt4g; Breton 1826: 358–363 cites Scott's description of cataract couching.
- Semeka-Pankratov, Elena (1979), 'A Semiotic Approach to the Polysemy of the Symbol *nāga* in Indian Mythology', in Irene Portis Winner and Jean Umiker-Sebeok (eds.), *Semiotics of Culture* (Approaches to Semiotics, 53; The Hague, Paris, NY: Mouton), 237–90. DOI: 10.1515/9783110823134–009; The contents of this volume were published simultaneously in *Semiotica* (1/3) 1979 (seme-1979b).
- Sena, Gangāprasād et al. (1886–93) (eds.), सुश्रुतसंहिता...द्छनाचार्य्य-कृत-निवन्ध-संग्रह, चकपाणिदत्त-कृत-भानुमती-टीका...वङ्गानुवाद...इरेजि प्रतिशब्द (Calcutta: Maṇirāma Press); Edition "g" in HIML: IB, 311.
- Sharma, Har Dutt (1939), Descriptive Catalogue of the Government Collections of Manuscripts Deposited at the Bhandarkar Oriental Research Institute, Vol. XVI, Part I, Vaidyaka (Descriptive Catalogue of Manuscripts in the Government Manuscripts Library, XVI.I; Pune: Bhandarkar Oriental Research Institute), ark:/13960/t0ms6rc70, accessed 23/10/2019.
- Sharma, Priya Vrat (1972), *Indian Medicine in the Classical Age* (Varanasi: Chowkhamba Sanskrit Series Office).
- —— (1975), *Āyurved Kā Vaijñānik Itihās* (Jayakṛṣṇadāsa Āyurveda Granthamālā; Vārānasī: Caukhambā Orientalia).
- —— (1982), *Dalhaṇa and his Comments on Drugs* (Delhi: Munshiram Manoharlal).
- (1999–2001a), Suśruta-Saṃhitā, with English Translation of Text and Dalhaṇa's Commentary Alongwith (sic) Critical Notes, 3 vols. (Haridas Ayurveda Series, 9; Varanasi: Chaukhambha Visvabharati).
- (1999–2001*b*), Suśruta-Saṃhitā, with English Translation of Text and Dalhaṇa's Commentary Alongwith (sic) Critical Notes, 3 vols. (Haridas Ayurveda Series, 9; Varanasi: Chaukhambha Visvabharati).

- Shastri, R. Shama (1920) (ed.), बोधायनगृद्धसूत्रम् *The Bodhāyana Grihyasutra* (Mysore: University of Mysore), ark:/13960/t2t492622.
- Singhal, G. D. et al. (1972–82), Diagnostic [and Other] Considerations in Ancient Indian Surgery (Varanasi: Singhal Publications); A translation of the Suśrutasaṃhitā in 10v.
- Sircar, Dinesh Chandra (1987), '6. Rākshaskhāli (Sundarban) Plate; Śaka 1118', *Epigraphia Indica (1953–54)*, 30: 42–3.
- Sleeman, W. H. (1893), Rambles and Recollections of an Indian Official (London: Constable), ark:/13960/t22c4bx7w, accessed 14/03/2018; V. 2 at http://n2t.net/ark:/13960/t2s52bq7w.
- Smith, Brian K. (1994), Classifying the Universe: The Ancient Indian Varna System and the Origins of Caste (New York, Oxford: Oxford University Press), ISBN: 0-19-508498-5.
- Spink, M. S. and Lewis, G. L. (1973) (eds.), *Albucasis on Surgery and Instruments: A Definitive Edition of the Arabic Text with English Translation and Commentary* (London: Wellcome Institute of the History of Medicine).
- Srikantha Murthy, K. R. (2000–2), *Illustrated Suśruta Saṃhitā: Text, English Translation, Notes, Appendices and Index* (Jaikrishnadas Ayurveda Series, 102; 1st edn., Varanasi: Chaukhambha Orientalia).
- Steingass, F. (1930), A Comprehensive Persian-English Dictionary Including the Arabic Words and Phrases to Be Met with in Persian Literature (London: Kegan Paul, Trench, Trubner).
- Strauss, Bettina (1934), 'Das Giftbuch des Śānāq: eine Literaturgeschichtliche Untersuchung', *Quellen und Studien zur Geschichte der Naturwissenschaften und der Medizin*, 4/2: [89]–[152] followed by Arabic text.
- Suvedī, K. S. and Tīvārī, N. (2000) (eds.), Sauśrutanighaṇṭuḥ: granthādau vistṛtena granthavaiśiṣṭyaprakāśakenopodghātena avasāne ca dravyāṇām anekabhāṣānām āvalī- paryāyasaṅgrahābhyāṃ samalaṅkrtaḥ Suśrutasaṃhitāyāṃ prayuktānām auṣadhadravyāṇāṃ paryāya-guṇakarmavarṇātmako pūrvagranthaḥ (Belajhuṇḍī, Dāṅ: Mahendrasaṃskṛtaviśvavidyālayaḥ).
- Tavernier, Jean-Baptiste (1684), Collections of Travels through Turky (sic), into Persia, and the East-Indies (London: M. Pitt).
- The Unicode Consortium (1991–2020), 'The Unicode Standard 13.0, NewaRange: 11400–1147F', URL, accessed 20/07/2021.

- Thorburn, S. S. (1876), *Bannu; or Our Afghan Frontier* (London: Trübner & Co.), URL, accessed 10/09/2019; Reprinted Lahore: Niaz Ahmad, 1978.
- UNESCO (2013), 'International Memory of the World Register Susruta Samhita (Nepal)', UNESCO, URL, accessed 11/09/2019.
- Unschuld, Paul Ulrich (1984), *Medicine in China: A History of Ideas* (Berkeley: University of California Press), ISBN: 0520050231.
- Valiathan, M. S. (2007), *The Legacy of Suśruta* (Hyderabad, Chennai, etc.: Orient Longman).
- Velankar, H. D (1925–30), Descriptive Catalogue of the Sanskṛta and Prākṛta Manuscripts in the Library of the Bombay Branch of the Royal Asiatic Society (Bombay: Royal Asiatic Society, Bombay), ark:/13960/t53g00h0n; Biswas #0115.
- Watt, George (1889–96), A Dictionary of the Economic Products of India (Calcutta: Dept. Revenue and Agriculture, Government of India), URL, accessed 28/04/2021.
- —— (1908), The Commercial Products of India, Being an Abridgement of "the Dictionary of the Economic Products of India" (London: John Murray), ark:/13960/t9t14xh3x.
- Whitney, William Dwight (1885), *The Roots, Verb-forms, and Primary Derivatives of the Sanskrit Language. A Supplement to his Sanskrit Grammar* (Leipzig: Breitkopf and Härtel), ark:/13960/t3qv3p906.
- Wilson, H. H. (1823), 'On the Medical and Surgical Sciences of the Hindus', *The Oriental Magazine and Calcutta Review*, 1: 207–12, 349–56, URL.
- Wren, R. C. (1956), Potter's New Cyclopaedia of Botanical Drugs and Preparations, ed. R. W. Wren (Rustington, Sussex: Health Science Press), ark:/13960/t14n65c9g.
- Wujastyk, Dagmar (2012), Well-mannered Medicine: Medical Ethics and Etiquette in Classical Ayurveda (New York: Oxford University Press). DOI: 10.1093/acprof:0so/9780199856268.001.0001.
- —— (2019), 'Iron Tonics: Tracing the Development from Classical to Iatrochemical Formulations in Ayurveda', *HIMALAYA*, the Journal of the Association for Nepal and Himalayan Studies, 39/1, ISSN: 2471-3716, URL, accessed 23/07/2019.
- Wujastyk, Dominik (1993), 'Indian Medicine', in W. F. Bynum and Roy Porter (eds.), *Companion Encyclopedia of the History of Medicine*, i (London: Routledge), chap. 33, 755–78, ISBN: 0-415-04771-4, URL.

- Wujastyk, Dominik (2002), 'Cannabis in Traditional Indian Herbal Medicine', in Ana Salema (ed.), *Āyurveda at the Crossroads of Care and Cure. Proceedings of the Indo-European Seminar on Ayurveda held at Arrábida, Portugal, in November 2001* (Lisbon: Centro de História de Além-Mar, Universidade Nova de Lisboa), 45–73, ISBN: 972-98672-5-9, URL, accessed 27/05/2019.
- —— (2003), The Roots of Ayurveda: Selections from Sanskrit Medical Writings (Penguin Classics; 3rd edn., London, New York, etc.: Penguin Group), ISBN: 0-140-44824-1.
- (2004), 'Agni and Soma: A Universal Classification', *Studia Asiatica: International Journal for Asian Studies*, IV–V, ed. Eugen Ciurtin: 347–70, ISSN: 1582–9111, URL.
- (2013), 'New Manuscript Evidence for the Textual and Cultural History of Early Classical Indian Medicine', in *Medical Texts and Manuscripts in Indian Cultural History*, ed. Dominik Wujastyk, Anthony Cerulli, and Karin Preisendanz (New Delhi: Manohar), 141–57, URL.
- —— (2021), 'MS London BL H. T. Colebrooke 908', URL.
- Wujastyk, Dominik, SKSEC Team, and Kessler, O. (2020), 'Suśrutasaṃhitā', PanditProject (6 Oct.), URL, accessed 14/09/2022.
- Yano, Michio (1986), 'A Comparative Study of *Sūtrasthānas*: Caraka, Suśruta, and Vāgbhaṭa', in Teizo Ogawa (ed.), *History of Traditional Medicine: Proceedings of the 1st and 2nd International Symposia on the Comparative History of Medicine—East and West* (Osaka: Division of Medical History, the Taniguchi Foundation), 325–44.
- Zimmermann, F. (1983), 'Suśrutasamhita. Essay review.', *Bulletin of the History of Medicine*, 57/2: 291–3, ISSN: 00075140, URL.
- Zimmermann, Francis (1999), *The Jungle and the Aroma of Meats* (2nd edn., Delhi: Motilal Banarsidass), ISBN: 8120816188.
- Zysk, Kenneth G. (1984), 'An Annotated Bibliography of Translations into Western Languages of Principle Sanskrit Medical Treatises', *Clio Medica*, 19/3–4: 281–91.
- (1985), Religious Healing in the Veda: With Translations and Annotations of Medical Hymns from the Rgveda and the Atharvaveda and Renderings from the Corresponding Ritual Texts (Transactions of the American Philosophical Society; Philadelphia: American Philosophical Society), ISBN: 0871697572.

- Zysk, Kenneth G. (1986), 'The Evolution of Anatomical Knowledge in Ancient India with Special Reference to Cross-cultural Influences', *Journal of the American Oriental Society*, 106: 687–705. DOI: 10.2307/603532.
- (2000), Asceticism and Healing in Ancient India: Medicine in the Buddhist Monastery (Indian Medical Tradition; 2nd edn., Delhi: Motilal Banarsidass); First published 1991. Reprint of 1998 edition.

Glossary

- aśvattha: 76	- regimen: 14	aids
- caraṇī: 70	ācārika	- aṅga: 57
- karņinī: 76	- medical advice: 23	ajākṣīrārdita
- lohitakṣayā: 72	accumulation	- stirred with goat's
- mahāyoniḥ: 74	- sañcaya: 15	milk: 64
- nyagrodha: 76	Aconite	ajamodā
- plakṣa: 76	- hālāhala: 46	- wild celery: 50
- prasraṃsanī: 72, 76	adhimantha	ajaruhā
- putraghnī: 72	- irritation: 63	- fern: 37
- sarvātmikā: 70	adhiṣṭhāna	ajeya
- sūcīvaktrā: 74	- base, foundation:	· ·
- udumbara: 76	•	- invincible: 37
- vāminī: 72	52	- "invincible": 51
- veśavāra: 76	- carriers: 52	akhiladehavyāptirūpam
- yonivyāpat: 74	- located: 14	- takes the form of
yonivyapai. 74	ādhmāna	pervading the whole
- gardabhāṇḍa: 76	- distension: 44	body: 47
- garaabhaṇṇa. 70 ?	adhodṛṣṭitva	alābu
•	- downward vision:	- bitter gourd: 33
- aṇḍanī: 73	63	ālepa
- caraṇī: 72	$adhyar{a}ya$	-liniment: 54
- karṇinī: 72	- sections: 17	ālepana
- putapāka: 68	admixture	-liniments: 37
- ṣaṇḍhī: 73	- prativāpa: 23	alleviated
- tarpaṇa: 68	affliction	- yāpya: 57
- udāvartā: 69	- upasarga: 37	alleviation
- utplutā: 71	agada	- pratīkāra: 15
- yoni: 72f	- antidote: 49	along these lines
'sun-creeper'	āgantu	- evam: 16
- sūryavallī: 50	- external factors: 16	alpasparśa
"invincible"	agnika	- lacking in
- ajeya: 51	- wild celery: 50	sensation: 75
1.1 . 11	<u>-</u>	āmalaka
abdominal lump	agra	- emblic: 55
- gulma: 68	- supernatant layer:	amaranth
abhayā	59	
- chebulic	agramukta	- taṇḍulīyaka: 35
myrobalan: 56	- free from the point:	āmāśaya
- myrobalan: 50	62	- stomach: 47f
abhramukta	āhāra	amra
- free from clouds: 62	- diet: 14	- mango: 55
abhyaṅga	āhārya	āmrāsthi
- massage: 35	- take away: 21	- mango stones: 34
- massage oil: 31, 37	ahorātra	amṛtā
ācāra	- day and night: 15	- calamine: 35

- heart-leaved	- gut: 48	asādhya
moonseed: 50	ants	- incurable: 54
amṛta	- pipīlika: 15	- untreatable: 61
- immortal: 37	anulepana	āsaṅgima
ānāha	- massage ointment:	- fastening: 21
- constipation: 45, 48,	31, 35	aśoka
51	- ointment: 35	- asoka tree: 55
anantā	ānūpaṃ vari	āśoka
- country	- marsh water: 75	- grief: 14
sarsaparilla: 50	ānūpodaka	asoka tree
aṇḍaja	- marsh water: 75	- aśoka: 55
-born from eggs: 15	apāmarga	āśrayin
aṇḍanī	- prickly chaff	- substrate: 14
- ?: 73	flower: 20	āsṛk
aṇḍīnī	apāṅga	- menstrual blood: 72
- with testicles: 70	- edge of the hole: 24	asthi
aṅga	- outer corner of the	-bones: 16
- aids: 57	eye: 61	aṣṭhīlā
- parts: 16	apatānaka	- pebble: 33
aṅgamarda	- convulsions: 20	asūyā
- bruising of the	apertures of the head	- jealousy: 14
limbs: 48	- kha: 36	aśvattha
anger	application of collyrium	- @: 76
- krodha: 14	- añjana: 54, 59	atibalā
anila	apramatta	- strong mallow: 58
- wind: 71	- undistracted: 25	aticaraṇā
animals	$ar{a}rar{a}$	- excessive
- paśu: 15	- awl: 19	intercourse: 73
añjana	araga timira	atis root
- application of	- non-bloodshot	- ativiṣā: 38
collyrium: 54, 59	blindness: 61	atis roots
- eye make-up: 31, 36	ardhakapāṭasandhika	- ativiṣā: 36
- eye ointment: 36f	- half door-hinge: 21	ativiṣā
- eye salve: 49	arid-land animals	- atis root: 38
- stibnite: 59	- jāṅgala: 59	- atis roots: 36
aṅkolla	arṇavamala	ātmaka
- sage-leaved	- cuttle fish: 56	- nature: 14
alangium: 34	arocaka	āṭopa
annamada	- loss of appetite: 48	- flatulence: 33
- intoxication from	arśas	atyānandā
food: 48	- prolapses: 68	- excessive
antidote	ārtava	enjoyment: 72
- agada: 49	- menstrual blood:	atyānanda
antra	69, 71, 76	- excessive
- entrails: 57	- mentrual blood: 73	enjoyment: 72

atyānandā	- vapour: 32f, 36	bimbī
- extremely excited:	bāṣpasveda	- red gourd: 33
70	- vapour: 75	bindings
avadāraņa	be exhausted	- bandha: 22
- fissuring: 37	- sāda: 48	bitter gourd
avalekhana	bearers	- alābu: 33
- combs: 31	- voḍhāra: 31	black creeper
āvarta	beauty berry	- pālindī: 35, 38, 50
- spiral: 61	- priyaṅgu: 59	black drongo
avaśardhita	beautyberry	- dhūmyāṭa: 32
- fart: 52	- priyaṃgu: 55	black part
awl	- śyāmā: 32, 35	- kṛṣṇa: 61
- <i>ārā</i> : 19	bellyache	black pepper
axelwood	- jaṭhara: 51	- marica: 54
- dhava: 65	bent brow and eye	black soot
ayana		
- half-year: 15	- vakrabhrūnetra: 63	- maṣī: 54 blackboard tree
āyatta	beryl	
- depends on: 14	- vaiḍūrya: 65	- saptachada: 34
āyur	bhadradāru	blackbuck
- life, longevity: 11	- deodar: 64	- harina: 37f
āyurveda	bhallātaka	blessings pronounced
- the science of life:	- marking-nut tree:	- svastivācana: 19
11	36	blindness
	bhanga	- timira: 61
baddham	- leaves: 62	blink of the eye
- bound, connected:	bhavet	- nimeṣa: 15
25	- it may be: 61	blood
bahuputrā	bhāvita	- rakta: 71
- wild asparagus: 36	- cooked: 59	- rudhira: 15
balā	- infused: 55	- śonita: 57
- country mallow: 58	bhedya	blood-bile
- country mallow: 75	- splitting: 22	- śonita-pitta,
bala	bheṣaja	rakta-pitta: 57
- strength: 14	- treatment: 69	blood-letting
bali	bhramaraka	- sirāvedha: 54
- morsel: 31	- drongo: 32	bloodloss
bamboo leaves	bhṛṅgarāja	- lohitakṣayā: 71
- veņupatrikā: 35	- racket-tailed	bloodshot blindness
bandha	drongo: 32	- rāgin timira: 58
- bindings: 22	$b\bar{\imath}ja$	- rāgiņi timire: 61
bandhujīva	- semen: 68f, 71f	blue dot cataract
- scarlet mallow: 36	bile	- mlāyin: 60
base, foundation	- pitta: 57	blue lotus
- adhiṣṭhāna: 52	bilious / choleric	- utpala: 55
bāṣpa	- pittalā: 69	blue vitriol
-		

- tuttha: 59	- <i>ūṣā</i> : 75	-
bodily constiuents		gamanādikriyāvināśakarī:
- dhātu: 47	cakradhārā	63
body language	- rim of a wheel: 22	chebulic myrobalan
- iṅgita: 31	cala	- abhayā: 56
body tissue	- liquid: 62	- harītakī: 34
- dhātu: 48	calamine	chedya
bones	- amṛtā: 35	- cutting: 22
- asthi: 16	can be mitigated	- excision: 16
born from eggs	- yāpya: 61	cheek-ear
- aṇḍaja: 15	$caranar{\imath}$	- gaṇḍakarṇa: 21
born in in a caul	-@: 70	chest
- jarāyuja: 15	-?: 72	- <i>hṛd</i> : 48
born of sweat	cardamom	chidra
- svedaja: 15	- elā: 56	- opening: 61
bound, connected	carman	child bearing
- baddham: 25	- pelt: 15	- kaumārabhṛtya: 66
box myrtle	carnivore	child-murderess
- kaṭphala: 56	- kravyabhuj: 58	- putraghnī: 69
breast-milk	carriers	child-murdress
- stanya: 76	- adhiṣṭhāna: 52	- putraghnī: 71
brhatī	cassia cinnamon	chital deer
•	***************************************	
- indian nightshades:	- patra: 35, 64 castor oil	- <i>pṛṣata</i> : 37 chital deer
50		
- poison berry: 50	- pañcāṅgulataila: 57	- pṛṣata: 32 choler
bṛhatīphala	castor oil tree	
- indian nightshade:	- gandharvahasta: 20	- <i>pitta</i> : 69, 72 choleric
76	cāsyāt	
bristles	- from his mouth: 33	- pittalā: 72
- śūka: 52	cataract	chyle
bṛṃhaṇa	- liṅganāśa: 61	- rasa: 47, 76
- nourishment: 14	caturvarga	cihna
bruising of the limbs	fourfold grouping:	- signs: 69
- aṅgamarda: 48	16	circuit of the pupil
bubbling	catuștaya	- dṛṣṭimaṇḍala: 61
- budbuda: 63	- four factors: 16	citron
budbuda	caused by wind	- mātuluṅga: 64
- bubbling: 63	- pavanodbhava: 57	clean
bulbs	causes	- pra√ sādh: 37
- kanda: 15	- hetu: 69	clusters
bull	causing a fall	- samplava: 15
- vṛṣabha: 32	- sraṃsanī: 69	cock
burning sensation	causing the destruction of	- tāmracūḍa: 58
- dāha: 72	actions such as	collection of diseases
burning sensations	moving	- rogasaṃgraha: 69

collection	countermeasures against	- phena: 65
- varga: 16	disorders of the	- samudraphena: 56
combined	female reproductive	-
- upahita: 57	system	dadhi
combs	- -	- curds: 33, 37
- avalekhana: 31	yonivyāpatpratiṣedha:	dāha
comfort	66	- burning sensation:
- sukha : 16	country mallow	72
complexion	- balā: 75	dainya
- varṇa: 14, 27	country mallow	- misery: 14
compounds	- balā: 58	dais
- yoga: 54	country sarsaparilla	- pīṭha: 21
compressed	- anantā: 50	daivakṛte
- saṃkṣipta: 21	cow's flesh	- naturally-
compressed	- gomāṃsa: 54	occurring: 61
- saṃkṣipta: 22	cow's urine	dantamāṃsa
conch	- gomūtra: 56	- flesh of the tooth:
- salilotthita: 60	cow-dung	34
	- gośakṛt: 55	dantaveșța
congested humours		- enclosure of a
- sannipāta: 16	creeper-ear	tooth: 34
constipation	- vallīkarņa: 21	dark colour
- ānāha: 45, 48, 51	creepy-crawlies	- dhyāma: 46
contamination dropsy	- sarīsṛpa: 12, 15	$dar{a}rvar{\imath}$
- duṣyodara: 47	crow's foot	- tree turmeric: 55
convulsions	- kākapada: 49	datta
- apatānaka: 20	crow's lip	- given: 32
cooked barley	- kākauṣṭha: 21	datura flower
- yavaudana: 61	curable	- dhattūrapuṣpa: 21
cooked	- sādhya: 54	day and night
- bhāvita: 59	curds	- ahorātra: 15
copper	- dadhi: 33, 37	decanted liquor
- <i>tāmra</i> : 63	- payasyā: 35	- surāmaṇḍa: 22f
coral	cure	decoction
- vidruma: 65	- siddhi: 49	- kvātha: 49
coșa	cured	decoctions
- driness: 63	- sādhya: 51	- kaṣāya: 31, 62
- heat: 75	cuscus grass	deer
cotton	- uśīra: 59	- eṇa: 58
- picu: 23	cutting	defects
cotton plant	- chedya: 22	- doṣa: 68
- kārpāsa: 20	cutting with a blade	delirium
cottony jujube	- śastrakṣata: 54	- moha: 44
- kākolī: 64	cuttle fish	demons
counteraction	- arṇavamala: 56	- graha: 66
- pratiședha: 54	cuttlefish bone	deodar
1 . 31		

- bhadradāru: 64	- doṣa: 76	dṛṣṭimaṇḍala
depends on	diseases of female	- circuit of the pupil:
- āyatta: 14	genitalia	61
depression	- yonivyāpat: 74	dṛṣtivibhrama
- viṣāda: 14	diseases	- faulty vision: 36
desert date	- roga: 68	dry rub
- iṅgudī: 59	disjunction	- utsādana: 35
desire	- viśleṣa: 47	dry rubs
- icchā: 14	disorders of the female	- utsādana: 31
dhānyāmla	reproductive system	dry
- fermented	- yonivyāpat: 66ff	- rūkṣa: 46
rice-water: 22	distension	duct
dhātakīpuṣpa	- ādhmāna: 44	- sirā: 20
- fire-flame bush	door-hinge	ducts
flowers: 34	- kapāṭasandhika: 21	- sirā: 16, 22
dhātrī	dosa	duḥkha
- emblic: 56	- defects: 68	- suffering: 14
dhattūrapuṣpa	- diseases: 76	dūrvā
- datura flower: 21	•	- panic grass: 63
dhātu	- humour: 47, 61, 74,	dūṣī-viṣa
	76	- slow-acting poison:
- bodily constiuents:	- humours: 15	48
47	- humours: 68	dūṣīviṣa
- body tissue: 48	doṣapariplava	- slow-acting poison:
- element: 39, 42, 44	- unsteadiness of the	51
dhava	humours: 63	dūṣīviṣāri
- axelwood: 65	double	- enemy of
dhūma	- yamalā: 34	slow-acting poison:
- inhaled smoke: 31	downward vision	51
dhūmadarśin	- adhodṛṣṭitva: 63	- slow-acting poison
- seeing smoke: 54	drākṣā	antidote: 33
dhūmyāṭa	- grapes: 64	dusta
- black drongo: 32	dravāñjana	- tainted: 22
dhyāma	- liquid collyrium: 59	dușyodara
- dark colour: 46	dravya	- contamination
- grimy: 31	- substance: 27	
diet	dried flesh	dropsy: 47
- āhāra: 14	- vallūraka: 21	dveșa
dilator	dried ginger	- hatred: 14
- pravardhanaka: 20	- nāgara: 56	dwindling away
discharge	driness	- kṣaya: 48
- praseka: 45	- coṣa: 63	earthen products
- srāva: 34, 36	drongo	- pārthiva: 15f
disease	- bhramaraka: 32	edge of the hole
- vyadhi: 16	dṛṣṭi	- apāṅga: 24
diseases	- pupil: 54, 62	elā
discuses	Papii. 34, 02	- Ciu

- cardamom: 56	errhines	fat
element	- nasya: 37	- vasā: 58
- dhātu: 39, 42, 44	essence	faulty medical treatment
elephant/snake	- sāra: 15	- mithyopacāra: 68
- nāga: 53	evam	faulty vision
elixir salve	- along these lines:	- dṛṣtivibhrama: 36
- rasāñjana: 59	16	female genital
elixir salve	excessive enjoyment	- yoni: 75
- rasāñjana: 25	- atyānandā: 72	female genitalia
elixir salve	excessive enjoyment	- yoni: 75
- rasāñjana: 55, 60	- atyānanda: 72	female genitals
elixir-salve	excessive intercourse	- yoni: 73
- rasāñjana: 55	- aticaraṇā: 73	female reproductive
elixir-salve	excision	organ
- śīta: 55	- chedya: 16	- yoni: 69
embelia	expansive	female reproductive
- vidaṅga: 59	- vikāsin: 46	system
emblic	expressed juice	- yoni: 68f
- āmalaka: 55	- svarasa: 55	fermented rice-water
- dhātrī: 56	external factors	- dhānyāmla: 22
emetic nut	- āgantu: 16	fern
	extract	- ajaruhā: 37
- madana: 33	- niryāsa: 36	filaments
eņa	extract of rohu carp	
- deer: 58	- rauhita: 55	- <i>kiñjalka</i> : 55 fire-flame bush flowers
enclosed roasting	extracted juice	
- puṭākhya: 58	- svarasa: 36	- dhātakīpuṣpa: 34
- puṭapāka: 59	extracts	fissuring
enclosure of a tooth	- rasa: 59	- avadāraņa: 37
- dantaveșța: 34	extremely excited	five astringent substances
ends	- atyānandā: 70	- pañcakaṣāya: 76
- vaktra: 63	eye make-up	flame of the forest
enemy of slow-acting	- añjana: 31, 36	- palāśa: 59
poison	eye ointment	flatulence
- dūṣīviṣāri: 51	- añjana: 36f	- āṭopa: 33
energy	eye salve	flavours
- ojas: 27	- añjana: 49	- rasa: 14, 27
entrails	eyewash	flesh
- antra: 57	- tarpaṇa: 36, 54, 59	- māṃsa: 16, 34
envy	3.7 3.7 3.7	flesh of the tooth
- <i>īrṣyā</i> : 14	falling	- dantamāṃsa: 34
eraṇḍapatranāla	- prasraṃsanī: 71	flooded
- stalk of the leaf of	fart	- pariplutā: 69, 71
castor oil plant: 25	- avaśardhita: 52	flowering trees
errhine	fastening	- vṛkṣa: 14
- nasya: 58	- āsaṅgima: 21	flowers

- puṣpa: 15	gently	great poison
follicles	- mṛdu: 64	- mahāviṣa: 45
- kha: 35	ghee	greed
fortnight	- sarpis: 23	- lobha: 14
- pakṣa: 15	- sarpiș: 37	green vitriol
four factors	- sarpis: 54	- kāsīsa: 60
- catuștaya: 16		grief
fourfold grouping	ginger - mahauṣadha: 38	- āśoka: 14
- caturvarga: 16	given	grimy
free from clouds	- datta: 32	- dhyāma: 31
- abhramukta: 62	glassy opacity	gruel
free from the point	- kāca: 59	- $yav\bar{a}g\bar{u}$: 49f
- agramukta: 62	godhā	guḍikā
frogs	- monitor lizard: 38,	- pill: 55
- maṇḍūka: 15		gulma
from his mouth	57 gold	- abdominal lump: 68
- cāsyāt: 33	- śātakumbhī: 63	guṇa
fruit trees	gomāṃsa	- qualities: 46
- vanaspati: 14	- cow's flesh: 54	gut
fruits	gomūtra	- antra: 48
- phala: 15	- cow's urine: 56	_
-	gośakṛt	hālāhala
gāḍha	- cow-dung: 55	- Aconite: 46
- pinched: 23	- juice of cow-dung:	half door-hinge
gairika	•	
- ochre: 54f	55 gourd	ardhakapāṭasandhika:
gairikaḥ	2	21
- red chalk: 63	- kośavatī: 50	half-year
gamanādikriyāvināśakarī	graha - demons: 66	- ayana: 15
- causing the		hare foot uraria
destruction of actions	grahotpatti	- pṛthakparṇī: 64
such as moving: 63	- origination of planetary deities: 66	hareņu
gaṇḍakarṇa	grāmyadharma	- hareņu: 56
- cheek-ear: 21		hareņu
gandharvahasta	- sex: 72 granthi	- hareņu: 55f
- castor oil tree: 20	-	hareņu
gardabhāṇḍa	- knots: 46	- hareņu: 55
: 76	- lumps: 20, 35, 45	hareņu
garlands	granthita	- hareṇu: 55f
- <i>sraj</i> : 31	- lumpy: 22	hari
gauze	grapes	- sun: 62
- prota: 23	- drākṣā: 64	haridrā
general rule	great aconite	- turmeric: 59
- paribhāṣā: 59	- mahāviṣa: 45	- turmerics: 50
genitals	great fragrance	hariṇa
- yoni: 74	- mahāsugandha: 37	- blackbuck: 37f

harītakī	hṛdayāvaraṇa	- sāriva: 56
- chebulic	- heart protected: 37	- śārivā: 63f
myrobalan: 34	huge	indian sarsaparillas
harșa	- mahatī: 70	- sārive: 50
- horripilation: 47	human being	indigo
- overexcitement: 14	- puruṣa: 13f, 16	- nīlī: 33
hatred	humour	indragopa
- dveṣa: 14	- doṣa: 47, 61, 74, 76	- red velvet mites: 15
heart protected	humours	- velvet-mite: 32
- hṛdayāvaraṇa: 37	- doṣa: 15	infertile
heart-leaved moonseed	humours	- vandhyā: 69, 71
- amṛtā: 50	- doṣa: 68	inflamed
- somavallī: 35		- saṃrambha: 23
heat	icchā	- vidagdha: 54
- coṣa: 75	- desire: 14	inflammation
henna	if, then not	- pāka: 72
- madayantikā: 36	- na ced: 61	infused
herbs	illness	- bhāvita: 55
- oṣadhi: 14	- ruj: 56	iṅgita
hetu	immortal	- body language: 31
- causes: 69	- amṛta: 37	ingudī
himalayan cherry	impotent	- desert date: 59
- padmaka: 64	- śaṇḍhī: 70	inhaled smoke
hīna	in those cases	- dhūma: 31
- reduced: 26	- tatra: 57	inherent factors
hīnakarṇa	inborn disorders of	- svabhāva: 16
- reduced-ear: 21	children	inherent
hoarseness	- !	- svābhāvika: 14
- pāruṣya: 44	kumārajanmavikāra:	injured
hogweed	67 incurable	- utpīḍita: 61
- punarnavā: 36		inspissation
holostemma	- asādhya: 54 indian barberry	- rasakriyā: 60
- payasyā: 64		intended
honey collyrium	- kālīyaka: 35 indian lotus	- vyākhyāta: 16
- kṣaudrāñjana: 56	- nalina: 55	intestines
honey	indian madder	- pakvādhāna: 48
- kṣaudra: 55	- mañjiṣṭhā: 20, 64	- pakvāśaya: 33, 47
- madhu: 55		intoxication from food
- madhus: 32	indian nightshade - <i>bṛhatīphala</i> : 76	- annamada: 48
horripilation	indian nightshades	invincible
- harşa: 47	- bṛhatī: 50	- ajeya: 37
horseradish tree		iron stones?
- śigru: 60	indian rose-bay	- lauhapāṣāṇa: 75
- sigru: 60 hṛd	- tagara: 35	irregularities
•	indian sarsaparilla - <i>kālānusāriva</i> : 56	- vaiṣamya: 14
- chest: 48	- <i>Katanusuniva</i> : 50	- vaișamya: 14

irrigated	- gośakṛt: 55	- regimen: 62
- pratipūraņa: 36	juices	karman
irrigation	- rasa: 58	- therapies: 16
- seka: 54	3.	kaṛnavyadha
irritation	kāca	- piercing the ear: 19
- adhimantha: 63	- glassy opacity: 59	karņikā
- prakopa: 15	kākapada	- protuberance: 72
īrṣyā	- crow's foot: 49	karņinī
- envy: 14	kākauṣṭha	
it may be	- crow's lip: 21	- @: 76
- bhavet: 61	kākolī	-?: 72
items created by time	- cottony jujube: 64	- protuberant: 70
- kālakṛta: 15f	kalā	kārpāsa
- <i>katak</i> į ta. 151	- minutes: 15	- cotton plant: 20
jambū	kālakṛta	kārśmarī
- jambu: 55	- items created by	- white teak: 55
jambu	time: 15f	kaṣāya
- jambū: 55	kālānusāriva	- decoctions: 31, 62
jambū	- indian sarsaparilla:	kāśipati
- jambul: 34	56	- lord of kāśī: 30
jambul 34	kālīyaka	kāsīsa
- jambū: 34	- indian barberry: 35	- green vitriol: 60
jāṅgala	kalka	kāṣṭhā
- arid-land animals:	- mash: 51	- trice: 15
	ū	kaṭphala
59	kalpa	- box myrtle: 56
jaṅgama	- rule: 52	kaumārabhṛtya
- mobile: 39	kāma	- child bearing: 66
- moving: 14, 16	- lust: 14	kavala
jarāyuja	kanda	- mouthwash: 34
- born in in a caul: 15	- bulbs: 15	kha
jasmine	kaṇṭaka	- apertures of the
- mālatī: 35	- spots: 35	head: 36
jaṭhara	kapālacūrņa	- follicles: 35
- bellyache: 51	- powdered	khara
jātī	earthenware	
- royal jasmine: 65	crockery: 22	- rough: 63
jealousy	kapāṭasandhika	kiṇihi
- asūyā: 14	- door-hinge: 21	- white siris: 50
joins	kapha	kinihī
- sandhāna: 21	- mucus: 36	- white siris: 59
- sandhi: 22	- phlegm: 44, 47f, 69,	kiñjalka
joints	73	- filaments: 55
- sandhi: 16	kapittha	kitchen
juice extract	- wood apple: 55	- mahānasa: 30
- svarasa: 15	- wood apple: 35f, 55	knots
juice of cow-dung	karma	- granthi: 46
		5 -

knowledge	kṣīṇa	- patra: 15
- veda: 11	- wasted: 23	lekhana
kohl	kṣīra	- scarification: 14
- srotas: 58	- milky sap: 39, 42,	lekhya
- srotoja: 56, 65	44	- scarification: 22
kośavatī	- sap: 15	life, longevity
- gourd: 50	kṣudrā	- āyur: 11
koṣītakī	- yellow-berried	limpid
- luffa: 33	nightshade: 50	- viśada: 46
kotha	kumārajanmavikāra	liṅga
- skin disease: 48	- inborn disorders of	- symptom: 36
kravyabhuj	children: 67	- symptoms: 47
- carnivore: 58	kumbhīsveda	liṅganāśa
kṛcchra	- pot-sweats: 75	- cataract: 61
- with difficulty: 61	kunta	liniment
kriyā	- small insects: 15	- ālepa: 54
- procedures: 13, 16	kupyaka	liniments
- treatment: 16, 60	- metal: 55	- ālepana: 37
kriyākāla	kuśa grass	liquid
- the time for	- kuśa: 58	- cala: 62
therapies: 16	kuśa	liquid collyrium
kriyāsaṅga	- kuśa grass: 58	- dravāñjana: 59
-loss of function: 63	kuṣṭha	liquorice
krmi	- pallid skin disease:	- madhuka: 38, 55
- worms: 15	48	- madhukair: 64
krodha	kvātha	liver extract
- anger: 14	- decoction: 49	- yakṛdrasa: 56
kṛṣṇa	lac	liver
- black part: 61	- lākṣā: 64	- yakṛt: 56f
kṛṣṇā	lacking in sensation	lobha
-long pepper: 54	- alpasparśa: 75	- greed: 14
kṛtamaṅgala	lāksā	located
- received a	- lac: 64	- adhiṣṭhāna: 14
benediction: 19	lāmajja grass	lodh tree
kṣaṇadāndhya	- lāmajja: 32	- lodhra: 55, 59
- night blindness: 56	lāmajja	lodhra
kṣāraka	- lāmajja grass: 32	- lodh tree: 55, 59
- lye: 58	lauhapāṣāṇa	lohitakṣayā
kṣaudra	- iron stones?: 75	- @: 72
- honey: 55	layer	- bloodloss: 71
kṣaudrāñjana	- paṭala: 61	long pepper
- honey collyrium:	lead	- kṛṣṇā: 54
56	- sīsaka: 21	- māgadha: 36, 59
kṣaya	leaves	- māgadhi: 57
- dwindling away: 48	- bhaṅga: 62	- māgadhī: 56, 58
0 , -	~	5 5,0

- pippali: 55	māgadha	mañjiṣṭhā
long peppers	- long pepper: 36, 59	- indian madder: 20,
- pippalī: 38	māgadhi	64
loose stool	- long pepper: 57	manyāstambhā
- vidbheda: 44	māgadhī	- paralysis of the
lord of kāśī	- long pepper: 56, 58	nape of the neck: 20
- kāśipati: 30	mahānasa	mardita
loss of appetite	- kitchen: 30	- massaged: 24
- arocaka: 48	mahāsugandha	marica
loss of function	- great fragrance: 37	- black pepper: 54
- kriyāsaṅga: 63	mahatī	markaṭa
lotus-splittable	- huge: 70	- monkey: 46
- utpalabhedyaka: 21	mahauṣadha	marking-nut tree
lotus-spots	- ginger: 38	- bhallātaka: 36
- padminīkaņṭaka: 35	mahāviṣa	marsh water
luffa	- great aconite: 45	- ānūpaṃ vari: 75
- koṣītakī: 33	- great poison: 45	- ānūpodaka: 75
lumps	mahāyoniḥ	māsa
- granthi: 20, 35, 45	- @: 74	- month: 15
lumpy	mahua	māṣaka
- granthita: 22	- madhūka: 58ff	- mung beans: 34
lust	maithuna	mash
- kāma: 14	- sexual intercourse:	- kalka: 51
lūtā	72	maṣī
- spiders: 12	mālatī	- black soot: 54
lye	- jasmine: 35	massage
- kṣāraka: 58	malice	- abhyaṅga: 35
madana	- mātsarya: 14	massage oil
- emetic nut: 33	māṃsa	- abhyaṅga: 31, 37
madayantikā	-flesh: 16, 34	massage ointment
- henna: 36	māṃsanirgama	- anulepana: 31, 35
madhu	- prolapse: 63	massaged
- honey: 55	manaḥśilā	- mardita: 24
madhuka	- realgar: 55, 59f, 65	mātsarya
- liquorice: 38, 55	- red arsenic: 54, 56	- malice: 14
madhūka	mānasa	mātuluṅga
- mahua: 58ff	- mental: 14	- citron: 64
madhukair	maṇḍala	matured
-liquorice: 64	- round blotches: 48	- vipakva: 55
madhus	maṇḍūka	may repair
- honey: 32	- frogs: 15	- yojayed: 24
madira	mango	meat from a chital deer
- spirits: 59	- amra: 55	- pārṣata: 38
madirā	mango stones	medical advice
- spirits: 56	- āmrāsthi: 34	- ācārika: 23

medicines cooked in a	- delirium: 44	mūṣikā
crucible	monitor lizard	- purging nut: 37
- puṭapāka: 54	- godhā: 38, 57	mūṣika
menstrual blood	monkey	- rodents: 12
- ārtava: 69, 71, 76	- markaṭa: 46	mūṣikakarṇī
- āsṛk: 72	month	- mouse-ear: 35
- rajas: 71	- māsa: 15	- woodrose: 35
mental	morsel	mustā
- mānasa: 14	- bali: 31	- nutgrass: 64
mentrual blood	mouse-ear	mustaka
- ārtava: 73	- mūṣikakarṇī: 35	- mustaka: 45
meṣaśṛṅga	mouthwash	mustaka
- periploca of the	- kavala: 34	- mustaka: 45
woods: 36	moving	myrobalan
- perploca of the	- jaṅgama: 14, 16	- abhayā: 50
woods: 65	mṛdu	- pathyā: 55
meṣaviṣāṇa	- gently: 64	1
- periploca of the	mucus	na ced
woods: 57	- kapha: 36	- if, then not: 61
metal	mudga	nadīja
- kupyaka: 55	- mung beans: 60	- salt: 55
milk	muhūrta	nāga
- payas: 37	- three-quarters of an	- elephant/snake: 53
milky sap	hour: 15	nāgara
- kṣīra: 39, 42, 44	mukhasaṃdaṃśā	- dried ginger: 56 nala
minutes	- nipping with the	
- kalā: 15	mouth: 52	- reed: 25 nalada
misery	muktā	- spikenard: 32, 59
- dainya: 14	- pearl: 61	nalina
miśrakacikitsa	muktvā	- indian lotus: 55
- various treatments:	- separate: 61	nasal medicine
25	mūla	- nasya: 49
misshapen eyeball	-root: 14	nasal medicines
- vilocana: 63	-roots: 15	- nasya: 54
mithyopacāra	mūlaka	nasya
- faulty medical	- mūlaka: 45	- errhine: 58
treatment: 68	mūlaka	- errhines: 37
mitigatible	- mūlaka: 45	- nasal medicine: 49
- yāpya: 54	multi-joins	- nasal medicines: 54
mlāyin	- vyāyojima: 21	nasya
- blue dot cataract:	mung beans	- snuff: 31
60	- māṣaka: 34	nasya
mobile	- mudga: 60	- snuff: 36
- jaṅgama: 39	mūrcchā	naturally-occurring
moha	- stupor: 33	- daivakṛte: 61

nature	- bṛṃhaṇa: 14	- saṃśamana: 14
- ātmaka: 14	numbness	- upaśama: 15
needle	- svāpa: 36	padma
- sūcī: 62	nutgrass	- sacred lotus: 35
neem tree	- mustā: 64	padmaka
- nimba: 20	nyagrodha	- himalayan cherry:
nemīsandhānaka	- @: 76	64
- rim-join: 22	- ,	padminīkaņṭaka
nemīsandhānakaḥ	obstructed by blood	- lotus-spots: 35
- rim-join: 21	- raktabaddha: 23	pain and injury
night blindness	ochre	- vedanābhighāta: 11
- kṣaṇadāndhya: 56	- gairika: 54f	pain
niḥkvātha	off his hand	- śūla: 48
	- sapāṇa: 57	_
- stewed juice: 50	oil	painful sensations
$nar{l}ar{l}$	- sneha: 15	- vedanā: 71
- indigo: 33	ointment	pāka
nimba	- anulepana: 35	- inflammation: 72
- neem tree: 20	ointment for rubbing the	- sepsis: 37
nimeșa	ear	- septic: 23
- blink of the eye: 15	- udvartana: 24	pakṣa
nipping with the mouth	ointment	- fortnight: 15
- mukhasaṃdaṃśā:	- pralepa: 32, 35	pakvādhāna
52	ojas	- intestines: 48
nirvedhima	J	pakvāśaya
- ready-split: 21	- energy: 27	- intestines: 33, 47
niryāsa	- vital energy: 14	palāśa
- extract: 36	opening - <i>chidra</i> : 61	- flame of the forest:
- resin: 15, 39, 42, 44		59
niśācara	options	pālindī
- nocturnal creature:	- vikalpa: 22	- black creeper: 35,
60	or not distorted	38, 50
nișevita	- vāvikṛtā: 34	pallava
- prepared: 58	origination of planetary	- shoots: 62
- used: 57	deities	pallid skin disease
nivāta	- grahotpatti: 66	- kuṣṭha: 48
- no wind: 15	oṣadhi	pañcakaṣāya
no wind	- herbs: 14	- five astringent
	- remedies: 16	e
<i>- nivāta</i> : 15 nocturnal creature	oṣadhī-	substances: 76 pañcāṅgulataila
	- remedies: 14	
- niśācara: 60	outer corner of the eye	- castor oil: 57
non-bloodshot blindness	- apāṅga: 61	panic grass
- araga timira: 61	overexcitement	- dūrvā: 63
non-flowering tree	- harṣa: 14	paralysis of the nape of
- vanaspati: 59		the neck
nourishment	pacification	- manyāstambhā: 20

paribhāṣā	pebble	- long peppers: 38
- general rule: 59	- aṣṭhīlā: 33	pith
pariplutā	pelt	- sāra: 39, 42, 44
- flooded: 69, 71	- carman: 15	pīṭha
parīṣeka	periploca of the woods	- dais: 21
- shower: 35	- meṣaśṛṅga: 36	pitta
pārṣata	- meṣaviṣāṇa: 57	- bile: 57
- meat from a chital	perploca of the woods	- choler: 69, 72
deer: 38	- meṣaśṛṅga: 65	pittalā
parśvabheda	pervasive	- bilious / choleric:
- ribs crack: 48	- vyavāyin: 46	69
pārthiva	phala	- choleric: 72
- earthen products:	- fruits: 15	plakṣa
15f	phañjī	- @: 76
partial blindness	- verbena: 36	plīhan
- timira: 57	phena	- spleen: 57
particulars	- cuttlefish bone: 65	plutā
- vikalpa: 16	phlegm	- sprung: 69
parts	- kapha: 44, 47f, 69,	poison berry
- aṅga: 16	73	- bṛhatī: 50
pāruṣya	- śleșman: 72	pot-sweats
-hoarseness: 44	phlegmatic	- kumbhīsveda: 75
paśu	- śleșmalā: 70, 73	powdered earthenware
- animals: 15	physical	crockery
paṭala	- śārīravad: 16	- kapālacūrņa: 22
-layer: 61	picu	pra $\sqrt{\ }$ sā dh
pāthā	- cotton: 23	- clean: 37
- velvet leaf: 59	pīḍ-	$pra\sqrt{kuth}$
pāṭhā	- press: 61	- rot: 34
- velvet-leaf: 50	piercing the ear	prabha
pathyā	- kaṛnavyadha: 19	- shine: 61
- myrobalan: 55	piercing	practical purposes
patra	- vyadha: 62	- prayojanavat: 15
- cassia cinnamon:	- vyadhana: 22	pragāḍha
35, 64	pigs' eye	- steeped: 57
-leaves: 15	- sūkarākṣitā: 63	prakopa
pavanodbhava	pill	-irritation: 15
- caused by wind: 57	- guḍikā: 55	prakṛti
payas	pinched	- temperament: 14
- milk: 37	- gāḍha: 23	pralāpa
payasyā	pipīlika	- ranting: 44
- curds: 35	- ants: 15	pralepa
- holostemma: 64	pippali	- ointment: 32, 35
pearl	- long pepper: 55	praseka
- muktā: 61	pippalī	- discharge: 45

prasraṃsanī	- gauze: 23	qualities
- @: 72, 76	protuberance	- guṇa: 46
- falling: 71	- karņikā: 72	1 1 1 1
pratīkāra	protuberant	racket-tailed drongo
- alleviation: 15	- karṇinī: 70	- bhṛṅgarāja: 32
- remedy: 54	pṛṣata	rāgin timira
pratipūraņa	- chital deer: 37	- bloodshot
- irrigated: 36	- chital deer: 32	blindness: 58
pratisāraņa	pṛthakparṇī	rāgiņi timire
- rub: 34	- hare foot uraria: 64	- bloodshot
- rubbing: 34	puffed up	blindness: 61
pratiședha	- śopha: 23	rainy seasons
- counteraction: 54	punarnavā	- varṣā: 15
prativāpa	- hogweed: 36	rajana
- admixture: 23	puṇḍarīka	- turmerics: 55f
pratuda	- puṇḍarīka: 45	rajas
- scavenging: 23	puṇḍarīka 45	- menstrual blood: 71
pravardhanaka		rājavṛkṣa
- dilator: 20	- puṇḍarīka: 45	- royal tree: 76
prayojanavat	pupil	rājimat
	- dṛṣṭi: 54, 62	- striped snake: 49
- practical purposes:	purging nut	rakta
15	- mūṣikā: 37	-blood: 71
prepared · · · · · ·	purification	raktabaddha
- nișevita: 58	- saṃśodhana: 14	- obstructed by
prepared with tilvaka	puruṣa	blood: 23
- tailvaka: 54	- human being: 13f,	raktakṣayā
prepared with turpeth	16	- with bloodloss: 69
- traivṛta: 54	puṣpa	ranting
press	-flowers: 15	- pralāpa: 44
- pīḍ-: 61	puṭāhvaya	rarified
prickly chaff flower	- taken hot: 59	- sūkṣma: 46
- apāmarga: 20	puṭākhya	rasa
priyaṃgu	enclosed roasting:	- chyle: 47, 76
- beautyberry: 55	58	- extracts: 59
priyaṅgu	putapāka	- flavours: 14, 27
- beauty berry: 59	- ?: 68	- juices: 58
probe	puṭapāka	- the blood of birds
- śalākā: 61f	- enclosed roasting:	and animals: 55
procedures	59	rasakriyā
- kriyā: 13, 16	- medicines cooked	- inspissation: 60
prolapse	in a crucible: 54	rasāñjana
- māṃsanirgama: 63	putraghnī	- elixir salve: 55, 59f
prolapses	- @: 72	- elixir salve: 25
- arśas: 68	- child-murderess: 69	- elixir-salve: 55

- extract of rohu	- cakradhārā: 22	- kalpa: 52
carp: 55	rim-join	
ready-split	- nemīsandhānaka:	sacred lotus
- nirvedhima: 21	22	- padma: 35
realgar	rim-join	sāda
- manaḥśilā: 55, 59f,	- nemīsandhānakaḥ:	- be exhausted: 48
65	21	sādhubaddha
received a benediction	rodents	- well joined: 25
- kṛtamaṅgala: 19	- mūṣika: 12	sādhya
red arsenic	roga	- curable: 54
- manaḥśilā: 54, 56	- diseases: 68	- cured: 51
red chalk	rogasaṃgraha	sage-leaved alangium
- gairikaḥ: 63	- collection of	- aṅkolla: 34
red gourd	diseases: 69	saindhava
- bimbī: 33	rohīta	- salt: 49
red velvet mites	- rohīta tree: 59	- sind salt: 54, 56
- indragopa: 15	rohīta tree	- sindh salt: 58 sal tree
reduced	- rohīta: 59	
- hīna: 26	root	- śālā: 55 śālā
reduced-ear	- mūla: 14	
- hīnakarṇa: 21	roots	- sal tree: 55 śalākā
reed	- mūla: 15	- probe: 61f
- nala: 25	rot	salilotthita
regimen	- pra√kuth: 34	- conch: 60
- ācāra: 14	rough	- water-born: 60
- karma: 62	- khara: 63	saliva
remedies	round blotches	- śleșman: 33
- oṣadhi: 16	- maṇḍala: 48	salt
- oṣadhī-: 14	royal jasmine	- nadīja: 55
remedy	- <i>jātī</i> : 65	- saindhava: 49
- pratīkāra: 54	royal tree	samāñjana
resin	- rājavṛkṣa: 76	- same collyrium: 59
- niryāsa: 15, 39, 42,	ŗtu	same collyrium
44	- season: 15	- samāñjana: 59
restrictions	rub	saṃkṣipta
- yantraṇā: 62	- pratisāraņa: 34	- compressed: 21
retaining	rubbing	- compressed: 22
- udāvartā: 71	- pratisāraņa: 34	samplava
rheum	rudhira	- clusters: 15
- upadeha: 36	-blood: 15	saṃrambha
ribs crack	ruj	- inflamed: 23
- parśvabheda: 48	- illness: 56	saṃśamana
rigid	$rar{u}k$ ș a	- pacification: 14
- sthirā: 63	- dry: 46	saṃśodhana
rim of a wheel	rule	- purification: 14

samudraphena	sarpiș	- <i>bīja</i> : 68f, 71f
- cuttlefish bone: 56	- ghee: 37	- śukra: 76
saṃvatsara	sarpis	separate
- year: 15	- ghee: 54	- muktvā: 61
sañcaya	sārṣapa	sepsis
- accumulation: 15	- sārṣapa: 45	- pāka: 37
sandal	sārṣapa	septic
- sugandhi: 57	- sārṣapa: 45	- pāka: 23
sandhāna	sarvātmikā	sesame oil
- joins: 21	- @: 70	- taila: 24
şaṇḍhī	śastrakṣata	sex
- ?: 73	- cutting with a	- grāmyadharma: 72
śandhī	blade: 54	sexual intercourse
- impotent: 70	śātakumbhī	- maithuna: 72
sandhi	- gold: 63	shine
- joins: 22	śatāvarī	- prabha: 61
- joints: 16	- wild asparagus: 60	shooting pain
sannipāta	sauvīraka	- śūla: 63
- congested	- stibnite: 55	shoots
humours: 16	scarification	- pallava: 62
sap	- lekhana: 14	- udbhid: 15
- kṣīra: 15	scarification	shower
sapāṇa	- lekhya: 22	- parīṣeka: 35
off his hand: 57	scarlet mallow	shrubs
saptachada	- bandhujīva: 36	- vīrudh: 14
- blackboard tree: 34	scavenging	siddhārthaka
sāra	- pratuda: 23	- white mustard: 64
- essence: 15	scramberry	siddhi
- pith: 39, 42, 44	- tālīśa: 55	- cure: 49
śārīravad	- tālīśapatra: 56	side-effects
- physical: 16	season	- upadrava: 37, 51
sarīsṛpa	- ṛtu: 15	signs
- creepy-crawlies: 12,	sections	- cihna: 69
15	- adhyāya: 17	śigru
śārivā	seed-eating	- horseradish tree: 60
- indian sarsaparilla:	- vișkira: 23	sind salt
63f	seeing smoke	- saindhava: 54, 56
sāriva	- dhūmadarśin: 54	sindh salt
- indian sarsaparilla:	seka	- saindhava: 58
56	- irrigation: 54	sinews
sārive	selu plum	- snāyu: 16
- indian sarsaparillas:	- śelu: 50	sirā
50	śelu	- duct: 20
sarpis	- selu plum: 50	- ducts: 16, 22
- ghee: 23	semen	sirāvedha

- blood-letting: 54	- nasya: 31	- causing a fall: 69
siris seeds	solid	srāva
- śirīṣamāṣaka: 34	- styāna: 62	- discharge: 34, 36
siris	soma creeper	- suppurating: 22
- śirīṣa: 50, 54, 65	- somalatā: 33	- suppuration: 23
śirīṣa	somalatā	śreyas
- siris: 50, 54, 65	- soma creeper: 33	- welfare: 11
śirīṣamāṣaka	somavalka	srotas
- siris seeds: 34	- white cutch tree: 36	-kohl: 58
sīsaka	somavallī	srotoja
-lead: 21	- heart-leaved	- kohl: 56, 65
śīta	moonseed: 35	stabdha
- elixir-salve: 55	śonita	- stiff: 22f
sitā	- blood: 57	stalk of the leaf of castor
- white sugar: 64	śonita-pitta, rakta-pitta	oil plant
skin disease	- blood-bile: 57	- eraṇḍapatranāla: 25
- koṭha: 48	śonitena	stalk
skin	- with blood: 63	- vṛnta: 55
- tvak: 15f	śopha	stanya
sleep	- puffed up: 23	- breast-milk: 76
- svāpa: 44	sphoṭa	stationary
śleşmalā	- spots: 36	- sthāvara: 14, 16, 39
- phlegmatic: 70, 73	spiced, cooked meats	steeped
ślesman	- veśavāra: 75	- pragāḍha: 57
- phlegm: 72	spiders	stewed juice
- saliva: 33	- lūtā: 12	- niḥkvātha: 50
slice of flesh	spikenard	sthāvara
- vadhra: 25f	- nalada: 32, 59	- stationary: 14, 16,
slow-acting poison	spiral	39
antidote	- āvarta: 61	sthirā
- dūṣīviṣāri: 33	spirits	- rigid: 63
slow-acting poison	- madira: 59	stibnite
- dūṣī-viṣa: 48	- madirā: 56	- añjana: 59
- dūṣīviṣa: 51	spleen	- sauvīraka: 55
small insects	- plīhan: 57	stick-ear
- kunta: 15	splitting	- yaṣṭīkarṇa: 21
snāyu	- bhedya: 22	stiff
- sinews: 16	spots	- stabdha: 22f
sneha	- kaṇṭaka: 35	stirred with goat's milk
- oil: 15	- sphoṭa: 36	- ajākṣīrārdita: 64
sniffing	sprung	stomach
- ucchingana: 62	- plutā: 69	- āmāśaya: 47f
snuff	sraj	strength
- nasya: 36	- garlands: 31	- bala: 14
snuff	sraṃsanī	striped snake
sirajj	<i>รานทุเธนเน</i>	siripeu siiuke

- rājimat: 49	- decanted liquor: 22f	- prepared with
strong mallow	sūryavallī	tilvaka: 54
- atibalā: 58	- 'sun-creeper': 50	tainted
stupor	svabhāva	- duṣṭa: 22
- mūrcchā: 33	-inherent factors: 16	take away
styāna	svābhāvika	- āhārya: 21
- solid: 62	-inherent: 14	taken hot
substance	svāpa	- puṭāhvaya: 59
- dravya: 27	- numbness: 36	takes the form of
substrate	- sleep: 44	pervading the whole
- āśrayin: 14	svarasa	body
$sar{u}car{\imath}$	- expressed juice: 55	-
- needle: 62	- extracted juice: 36	akhiladehavyāptirūpam:
sūcīvaktrā	- juice extract: 15	47
- @: 74	śvāsa	tālīśa
- with a needle-like	- wheezing: 44	- scramberry: 55
opening: 70	svastivācana	tālīśapatra
suffering	- blessings	- scramberry: 56
- duḥkha: 14	pronounced: 19	tāmra
sugandhi	svayaṃgupta	- copper: 63
- sandal: 57	- velvet bean: 55	tāmracūḍa
śūka	śvayathu	- cock: 58
- bristles: 52	- swelling: 20	taṇḍulīyaka
sūkarākṣitā	svedaja	- amaranth: 35
	-born of sweat: 15	
- pigs' eye: 63	śvetā	tarpaṇa
sukha	- white clitoria: 35	- ?: 68
- comfort: 16	swelling	- eyewash: 36, 54, 59
śukra	- śvayathu: 20	tatra
- semen: 76	śyāmā	- in those cases: 57
sūkṣma	- beautyberry: 32, 35	temperament
- rarified: 46	syanda	- prakṛti: 14
śūla	- watery eye: 60	the blood of birds and
- pain: 48	symptom	animals
- shooting pain: 63	- liṅga: 36	- rasa: 55
sun	symptoms	the fragrant one in oil
- hari: 62	- linga: 47	- tailasugandhi: 57
sunivișța	8u. 47	the science of life
- very intent: 24	tagara	- āyurveda: 11
supernatant layer	- indian rose-bay: 35	the three fruits
- agra: 59	taila	- triphalā: 59
suppurating	- sesame oil: 24	the three spices
- srāva: 22	tailasugandhi	- vyoṣa: 56
suppuration	- the fragrant one in	the time for therapies
- srāva: 23	oil: 57	- kriyākāla: 16
surāmaṇḍa	tailvaka	therapies

- karman: 16	- ?: 69	utsādana
three fruits	- retaining: 71	- dry rub: 35
- triphalā: 54, 56	udbhid	- dry rubs: 31
three-leaved caper	- shoots: 15	uttarabasti
- varuṇa: 36	udumbara	- vaginal douche: 74
three-quarters of an hour	- @: 76	C
- muhūrta: 15	udvartana	vadhra
timira	- ointment for	- slice of flesh: 25f
- blindness: 61	rubbing the ear: 24	vagina
- partial blindness:	udvesṭana	- yoni: 76
57	- writhing: 44	vaginal douche
traivṛta	undistracted	- uttarabasti: 74
- prepared with	- apramatta: 25	vaginal worm
turpeth: 54	unsteadiness of the	- yonikrimi: 76
treatable	humours	vaginal worms
- <i>yāpya</i> : 51	- doşapariplava: 63	- yonikrimi: 76
treatment	untreatable	vaginas
- bheṣaja: 69	- asādhya: 61	- yoni: 75
- kriyā: 16, 60	upadeha	vaiḍūrya
tree turmeric	- rheum: 36	- beryl: 65
- dārvī: 55	upadrava	vaiṣamya
trice	- side-effects: 37, 51	- irregularities: 14
- kāṣṭhā: 15	upahita	vakrabhrūnetra
triphalā	- combined: 57	- bent brow and eye:
- the three fruits: 59	upaśama	63
-three fruits: 54, 56	- pacification: 15	vaktra
trivṛt	upasarga	- ends: 63
- turpeth: 57f		vallīkarṇa
turmeric	- affliction: 37	- creeper-ear: 21
- haridrā: 59	ūṣā	vallūraka
turmerics	- burning sensations:	- dried flesh: 21
- haridrā: 50	75	vāminī
- rajana: 55f	used	- @: 72
turpeth	- nișevita: 57	- vomiting: 69, 71
- trivṛt: 57f	uśīra	vanaspati
tuttha	- cuscus grass: 59	- fruit trees: 14
- blue vitriol: 59	- vetiver grass: 35	- non-flowering tree:
tvak	utpala	59
- skin: 15f	- blue lotus: 55	vandhyā
*	- water-lily: 32, 50	-infertile: 69, 71
ucchiṅgana	utpalabhedyaka	vapour
- sniffing: 62	- lotus-splittable: 21	- <i>bāṣpa</i> : 32f, 36
udaśvit	utpīdita	- bāṣpasveda: 75
- watered buttermilk:	- injured: 61	varga
33	utplutā	- collection: 16
udāvartā	-?: 71	various treatments

- miśrakacikitsa: 25	vetiver grass	- piercing: 62
varņa	- uśīra: 35	vyadhana
- complexion: 14, 27	vidagdha	- piercing: 22
varṣā	- inflamed: 54	vyadhi
- rainy seasons: 15	vidaṅga	- disease: 16
varti	- embelia: 59	vyākhyāta
- wick: 20	viḍbheda	- intended: 16
vartti	-loose stool: 44	vyāla
- wicks: 65	vidruma	- wild animals: 15
varuṇa	- coral: 65	vyavāyin
- three-leaved caper:	vikalpa	- pervasive: 46
36	- options: 22	vyāyojima
vasā	- particulars: 16	- multi-joins: 21
- fat: 58	vikāsin	vyoṣa
vāta	- expansive: 46	- the three spices: 56
- wind: 21, 68f	vilocana	•
vātalā	- misshapen eyeball:	wasted
- windy: 69, 71	63	- kṣīṇa: 23
vāvikṛtā	vipakva	water-born
- or not distorted: 34	- matured: 55	- salilotthita: 60
veda	vīrudh	water-lily
		- utpala: 32, 50
- knowledge: 11	- shrubs: 14	watered buttermilk
vedanā	viṣāda	- udaśvit: 33
- painful sensations:	- depression: 14	watery eye
71	viśada	- syanda: 60
vedanābhighāta	- limpid: 46	welfare
- pain and injury: 11	viṣkira	- śreyas: 11
velvet bean	- seed-eating: 23	well joined
- svayaṃgupta: 55	viśleṣa	- sādhubaddha: 25
velvet leaf	- disjunction: 47	wheezing
- pāthā: 59	vital energy	- śvāsa: 44
velvet-leaf	- ojas: 14	white clitoria
- <i>pāṭhā</i> : 50	voḍhāra	- śvetā: 35
velvet-mite	- bearers: 31	white cutch tree
- indragopa: 32	vomiting	- somavalka: 36
veņupatrikā	- vāminī: 69, 71	white mustard
- bamboo leaves: 35	vṛkṣa	- siddhārthaka: 64
verbena	- flowering trees: 14	white siris
- phañjī: 36	vṛnta	- kinihī: 59
very intent	- stalk: 55	- kiṇihi: 50
- sunivișta: 24	vṛṣabha	white sugar
veśavāra	- bull: 32	- sitā: 64
- @: 76	vulva?	white teak
- spiced, cooked	- yoni: 72	- kārśmarī: 55
<u> -</u>	• · · · · · · · · · · · · · · · · · · ·	

- varti: 20	- mūṣikakarṇī: 35	yoni
wicks	worms	-?: 72f
- vartti: 65	- kṛmi: 15	- female genital: 75
wild animals	writhing	- female genitalia: 75
- vyāla: 15	- udveșțana: 44	- female genitals: 73
wild asparagus	1 1	- female reproductive
- bahuputrā: 36	yakṛdrasa	organ: 69
- śatāvarī: 60	- liver extract: 56	- female reproductive
wild celery	yakṛt	system: 68f
- agnika: 50	- liver: 56f	- genitals: 74
- ajamodā: 50	yamalā - double: 34	- vagina: 76
wind	yantraṇā	- vaginas: 75
- anila: 71	- restrictions: 62	- vulva?: 72
- <i>vāta</i> : 21, 68f	yāpya	- womb: 66
windy	- alleviated: 57	yonikrimi
- vātalā: 69, 71	- can be mitigated:	- vaginal worm: 76
with a needle-like	61	- vaginal worms: 76
opening	- mitigatible: 54	yonivyāpat
- sūcīvaktrā: 70	- treatable: 51	- @: 74
with blood	yaṣṭīkarṇa	- diseases of female
- śonitena: 63	- stick-ear: 21	genitalia: 74
with bloodloss	yavāg $ar{u}$	- disorders of the
- raktakṣayā: 69	- gruel: 49f	female reproductive
with difficulty	yavaudana	system: 66ff
- kṛcchra: 61	- cooked barley: 61	yonivyāpatpratiședha
with testicles	year	- countermeasures
- aṇḍīnī: 70	- saṃvatsara: 15	against disorders of
womb	yellow-berried	the female
- yoni: 66	nightshade	reproductive system:
wood apple	- kṣudrā: 50	66
- kapittha: 35f, 55	yoga	yuga
wood apple	- compounds: 54	- yuga: 15
- kapittha: 55	yojayed	yuga
woodrose	- may repair: 24	- yuga: 15

Glossary of Medical Substances

axlewood dhava. Anogeissus latifolia (Roxb. ex DC.) Wall. ex Guill & Perr. See AVS 1.163 f., GIMP: 20, 53 beautyberry śyāmā → priyaṅgu. Callicarpa macrophylla, Vahl. See AVS 1.334, NK #420., 51 beggarweed aṃśumatī. Desmodium gangeticum (L.) DC (Dymock 1.428, GJM 602, NK #1192; ADPS 382, 414 and AVS 2.319, 4.366 are confusing), 51 cardamom elā. Elettaria cardamomum, Maton. See AVS 2.360, NK #924, Potter 66.,

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(pālindī. Ichnocarpus frutescens, (L.) R.Br.
   51
cassia cinnamon patra. Cinnamomum tamala,
                                                   or Cryptolepis buchanani, Roemer &
   (Buch.-Ham.) Nees. See AVS 2.84, NK #.,
                                                   Schultes AVS 3.141, 3.145, 3.203, NK #1283,
                                                   #1210, ADPS 434)., 51
   51
cherry elavāluka. Prunus cerasus, L.?. See
                                                jequirity guñjā. Abrus precatorius, L. See AVS
   BVDB 58, NK #2037, GVDB: 58., 51
                                                   1.10, NK #6, Potter 168., 40
cobra's saffron nāgapuspa. = nāgakeśara.
                                                liquorice (?) klītaka. Glycyrrhiza glabra, L.?
                                                   GVDB: 123-124 discuss the many
   Mesua ferrea, L. See NK #1595, GVDB: 220,
                                                   difficulties in identifying this plant, 40
                                                liquorice madhuka. Glycyrrhiza glabra, L. See
corky coral tree pāribhadra. Erythrina
   suberosa Roxb. See GVDB 245, 53
                                                   AVS 3.84, NK #1136., 51
costus kustha. Saussurea costus, Clarke. See
                                                lodh tree lodhra. Symplocos racemosa, Roxb.
   NK #2239., 51
                                                   See GJM 597, ADPS 279f., 51
country mallow balā. Sida cordifolia, L. See
                                                long pepper pippalī. Piper longum, L. See
   ADPS 71, NK #2297., 51
                                                   ADPS 374, NK #1928., 51
                                                natron suvarcikā. Sodium carbonate. NK 2,
crape jasmine tagara. Tabernaemontana
   divaricata (L.) R.Br. ex Roem. & Schultes.
                                                   p. 101. Dalhana identifies suvarcikā with
   See GJM 557, AVS 5.232., 51
                                                   svarjikṣāra 4.8.50 (Su 1938: 441), 51
crimson trumpet-flower tree pātalā.
                                                peas harenu = satīna. Pisum sativum, L. Singh
   Stereospermum chelonides, (L. f.) A. DC.
                                                   and Chunekar (GVDB: 419-420, 467-468)
   See GJM 573, AVS 5.192ff., ADPS 362f., AVS
                                                   notes that two plants are usually meant
   3.1848f., IGP 1120, Dymock 3.20ff., 53
                                                   under this name, but there is no agreement
deodar bhadradāru. Cedrus deodara, (Roxb.ex
                                                   on the identity of the second, 50, 51
   D.Don) G. Don. See AVS 41, NK #516., 51
                                                poison berry brhatī. Solanum violaceum,
                                                   Ortega. See ADPS 100, NK #2329, AVS
embelia vidanga. Embelia ribes, Burm. f. See
   ADPS 507, AVS 2.368, NK #929, Potter 113.,
                                                   5.151., 51
                                                pondweed paripelavā. Normally a neuter
   51
                                                   noun. Singh and Chunekar (GVDB: 238,
false daisy (?) (su)bhangura = bhrnga? Eclipta
                                                   264-265, 409) argued that plava and
   prostrata (L.) L. See GVDB: 288., 40
garjan oil tree aśvakarna. Dipterocarpus
                                                   śaivāla are the same thing, and may be
                                                   either Zannichellia palustris, L., or
   turbinatus Gaertn. f. See GVDB: 28,
                                                   Potamogeton pectinatus, L., 51
   GIMP: 100, 53
                                                red chalk gairika., 51
gold hema. gold., 51
golden shower tree rājadruma = āragvadha.
                                                rosha grass dhyāmaka. Cymbopogon martinii
                                                   (Roxb.) Wats. See AVS 2.285, NK #177., 51
   Cassia fistula L. See GVDB 37, 53
hogweed punarnavā. Boerhaavia diffusa, L.
                                                sandalwood candana. Santalum album, L. See
                                                   ADPS 111, NK #2217., 51
   See ADPS 387, AVS 1.281, NK #363., 50
                                                scented pavonia bālaka. Pavonia odorata,
Indian barberry dāruharidrā. Berberis
                                                   Willd. See ADPS 498, NK #1822., 51
   aristata, DC. See Dymock 1.65, NK #685,
                                                small-flowered crape myrtle sidhraka.
   GJM 562, IGP 141., 51
                                                   Lagerstroemia parviflora Roxb. See
Indian madder mañjisthā. Rubia cordifolia, L.
                                                   GVDB: 432, 53
   See IGP, GIMP 215, GVDB: 289., 51
Indian sarsaparilla sārivā. anantā
                                                spikenard māmsī. Nardostachys grandiflora,
                                                   DC. See NK #1691., 51
   (Hemidesmus indicus, (L.) R. Br.ADPS 434,
   AVS 3.141-5, NK #1210) and black creeper
                                                sugar sitā, sugar. Dalhana makes this
```

equation at 1.37.25 (Su 1938: 162)., 51 sweet-scented oleander aśvamāraka. Nerium oleander, L. See ADPS 223, NK #1709., 40 three heating spices śuṇṭhī (Dried ginger) Zingiber officinale, Roscoe. ADPS 50, NK #2658, AVS 5.435, IGP 1232, pippalī (long pepper) Piper longum, L.ADPS 374, NK #1928, and marica (black pepper) Piper nigrum, L.ADPS 294, NK #1929., 50 turmeric rajanī. Curcuma longa, L. ADPS 169, AVS 2.259, NK #750., 51 water-lily utpala. Nymphaea stellata, Willd.

- See GJM 528, IGP 790; Dutt 110, NK #1726., 51
- weaver's beam tree muṣkaka. Schrebera swietenioides, Roxb. See AVS 5.88, Lord, NK #2246., 53
- white cutch tree somavalka. Acacia polyacantha, Willd. See AVS 1.30, IGP 7, GJM 602,AVS 2.935; pace NK #1038., 53
- yellow-berried nightshade kṣudrā. Solanum virginianum, L. See ADPS 100, NK #2329, AVS 5.164., 51

Appendix

On digital critical editions

- Price, Kenneth M. (2013), 'Electronic Scholarly Editions', in Ray Siemens and Susan Schreibman (eds.), *A Companion to Digital Literary Studies* (Chichester, UK: John Wiley & Sons, Ltd), 434–50. DOI: 10.1002/9781405177504.ch24, URL, accessed 04/07/2021.
 - A survey of the field in 2013, with a focus on the presentation of electronic texts rather than on critical editing as such.
- Moureau, Sébastien. (2015), 'The Apparatus Criticus', in Alessandro Bausi et al. (eds.), *Comparative Oriental Manuscript Studies: An Introduction* (Hamburg: Tredition), 348–52, ISBN: 978-3-7323-1768-4, URL, accessed 04/07/2021.
 - Useful discussion about the *apparatus criticus* in general, and an evaluation of the plus and minus points of positive and negative apparatuses.
- Burghart, Marjorie (2016), 'The TEI Critical Apparatus Toolbox: Empowering Textual Scholars through Display, Control, and Comparison Features', *Journal of the Text Encoding Initiative*, 10/Issue 10. DOI: 10.4000/jtei.1520, URL, accessed 12/12/2017.
 - Discussion of a software tool, including the handling of positive and negative apparatus. Makes the assumption that online displays are notational variants only.
- Burghart, Marjorie (2017), 'Textual Variants', in Marjorie Burghart et al. (eds.), Digital Editing of Medieval Texts: A Textbook (DEMM), URL, accessed 04/07/2021.
 - Discussion of how to express various kinds of apparatus in TEI.
- Bausi, Alessandro et al. (2015), *Comparative Oriental Manuscript Studies. An Introduction* (Hamburg: Tredition). DOI: 10.5281/ZENODO.46784. A huge book that disappointingly says nothing at all about Sanskrit manuscripts. Nevertheless there are many interesting case studies and remarks applicable to the Indian manuscript tradition.

Todo list

	l a ő i a na	~ -					
		25					
	Cf. Arthaśāstra 1.21.8						
	I'm still unhappy about this verse.	34					
	Mention this in the introduction as an example of the scribe knowing						
	the vulgate	34					
	fn about sadyas+	34					
	Bear's bile instead of deer's bile.	35					
	punarṇṇavā in the N & K MSS						
	śrita for śṛta	36					
	explain more	36					
	Medical difference from Sharma.	36					
	example where the vulgate clarifies that these should be used separ-						
	ately; appears to be a gloss inserted into the vulgate text						
	The two uses of prāpta are hard to translate. prāptā $ otan ightharpoonup$ kṣipraṃ is an						
example of the vulgate banalizing the Sanskrit text to make sense of							
	a difficult passage	37					
	$\sqrt{\text{vyadh not }\sqrt{\text{vedh (also elsewhere and for the ears)}}$, causative optative.	37					
	opposite of the vulgate Same as 1.8.89 (As 1980: 79)						
	Medical difference.	38					
	Expected (CIPP):						
Croton tiglium, L. = Naepala, Jayapala, kanakaphala, titteriphala (NL							
#720); Calotropis spp.;							
Citrullus colocynthus (colocynth);							
	Ricinus communis (castor);	40					
	Note about Gayī's edition	40					
	-> ativiṣa	45					
	Look up the ca. reference	45					
	Come back to the issue of "kalpa". Look up passages in the Kośa	52					
	where is cutting with a knife related to removing bile or phlegm	54					
	maṣī burned charcoal. Find refs						
	find ref	60					
	Check out these refs	60					
	meaning of kalpa	60					
	or a dual?	65					