

A Translation of the New Edition of the
Suśrutasamhitā

Jason Birch Dominik Wujastyk Andrey Klebanov

Draft of 11th March 2022
© Jason Birch and Dominik Wujastyk



© Dominik Wujastyk. I am distributing this pre-publication draft under a
Creative Commons Attribution-ShareAlike 4.0 International License.
For details, see <http://creativecommons.org/licenses/by-sa/4.0/>

Abstract

The [Suśruta Project](#) is producing a new Sanskrit text edition of the *Suśrutasaṃhitā* based on the early Nepalese manuscripts.¹ As we gradually transcribe and edit the manuscripts, we are producing this new translation of the classic work.

¹ MS Kathmandu KL 699, MS Kathmandu NAK 1-1079, and MS Kathmandu NAK 5-333.

Contents

The manuscripts and editions used in the vulgate editions by Yā-	
davaśarman Trivikrama Ācārya	5
The sources of the 1915 edition	5
The sources of the 1931 edition	5
The sources of the 1938 edition	6
Evaluation	7
The 1939 edition	8
For the Bhānumatī	8
For the Suśrutasamhitā	10
Evaluation	10
Features of the manuscript transmission	12
Palaeographical features	12
Chart of characters	12
Sūtrasthāna, adhyāya 1	13
Sūtrasthāna, adhyāya 2	20
Literature	20
Sūtrasthāna, adhyāya 28	21
Kalpasthāna, adhyāya 1	22
Literature	22
Manuscript notes	23
Translation	24
[Threats to the king]	24
Kalpasthāna, adhyāya 2	34
Introduction	34
Translation	34
The effects of poisons	39
Symptoms of tuber poisoning	40
Slow-acting poison	42
The stages of slow poisoning	43
Remedies for the stages of slow poisoning	44
The 'invincible' ghee	46

Curing the 'slow-acting' poison	47
Uttaratantra, adhyāya 16 (17 in the vulgate)	33
Literature	33
Translation	33
[Complications]	42
[Characteristics of the probe]	43
[Complications]	43
Uttaratantra, adhyāya 38	45
Abbreviations	57
Index of Manuscripts	61
References	61
Glossary	77
On digital critical editions	67

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, Ḍalhaṇa, remarked,

In spite of having made the greatest effort, it has been impossible to identify these plants. In the Himalayan regions, Kirātas and Śabarās are able to identify them.¹⁰⁰

Ḍalhaṇa also recorded variant readings of these poison names from the manuscripts that he consulted of the lost commentary of Gayadāsa (fl. c. CE 1000). The identities of these poisons have been in doubt for at least a thousand years.¹⁰¹ 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.¹⁰²

Translation

- 1 And now I shall explain **what should be known** about stationary poisons.¹⁰³

¹⁰⁰ After *Suśrutasaṃhitā*, *kalpasthāna* 2.5 (Su 1938: 564). From the view of Sanskrit authors, Kirātas and Śabarās were tribal peoples. The eleventh-century author Bhikṣu Govinda, however, cast his treatise as a dialogue with a Kirāṭa king called Madana who was a master of the alchemical art (HIML: IIA, 620).

¹⁰¹ See Wujastyk 2003: 80–81.

¹⁰² Valuable reference sources on Indian plant toxicology in general include Pillay 2013: chs. 10, 11 and Barceloux 2008: parts 1.II, 3 and 4.

¹⁰³ 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.

- 3 It is said that there are two kinds of poisons, stationary (*sthāvara*) and mobile (*jaṅgama*). The former dwells in ten sites, the latter in sixteen places.
- 4 Traditionally, the ten are: root, leaf, fruit, flower, bark, milky sap (*kṣīra*), pith (*sāra*), resin (*niryāsa*), the elements (*dhātu*), and the tuber.
- 5 In that context,

- the eight root-poisons are:
 1. liquorice (*klītaka*)ⁱ,¹⁰⁴
 2. sweet-scented oleander (*aśvamāraka*)ⁱⁱ,¹⁰⁵
 3. jequirity (*guñjā*)ⁱⁱⁱ,¹⁰⁶
 4. **aconite** (*subhaṅgurā*)^{iv},¹⁰⁷
 5. **karatā**,¹⁰⁸ and ending with
 6. leadwort (*vidyutśikhā* → *agni- or rakta-śikhā?*)^v,¹⁰⁹
 7. **‘endless’** (*ananta*)^{vi}, and
 8. *vijayā*,¹¹⁰

Expected (Pillay 2010):
Croton tiglium, L. = Nae-pala, Jayapala, kaphala, titteriphala (NL #720); Calotropis spp.; Citrullus colocynthus (colocynth); Ricinus communis (castor);

Note about Gayī's edition.

- 104 Liquorice eaten in excess can be poisonous.
- 105 The roots of sweet-scented oleander are highly toxic, as are most parts of the plant (Pillay and Sasidharan 2019).
- 106 Jequirity does indeed contain 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.
- 107 The plant is usually called just *bhaṅgurā* without the prefix *su-* “good.”
- 108 This poisonous root cannot at present be identified. Similar-sounding candidates include *karkaṭaka*, *karaghāṭa* (emetic nut), and *karahāṭa*, 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 *karatā* (mn.) with safflower (*Carthamus tinctorius*, L.), but this plant does not have a poisonous root.
- 109 The roots of both rose and white leadwort are very toxic.
- 110 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 *Sauśrutaniḥaṇṭu*

- i Glycyrrhiza glabra, L.; see AVS 3.84, NK #1136
- ii Nerium oleander, L.; see ADPS 223, NK #1709
- iii Abrus precatorius, L.; see AVS 1.10, NK #6, Potter 168
- iv → *bhaṅgura* = *atviṣā*? Aconitum ferox, Wall. ex Ser.; see NK #38
- v Plumbago zeylanica (or rosea?), L.; see NK #1966, 1967
- vi ?; see ?

- the leaf-poisons include:
 - ‘poison-leaf’ (*viṣapatrikā*)^{vii},
 - ‘drum-giver’ (*lambaradā*)^{viii},
 - thorn apple (*karambha*)^{ix}, and
 - ‘big thorn apple’ (*mahākarambha*)^x;
- the fruits of items like: jequirity (*guñjā*)^{xi}, rūṣkara ()^{xii}, viṣa ()^{xiii}, and vedikā ()^{xiv}, are
 - *kumudavati* (*kumadavati*)^{xv},
 - *reṇuka* (?)^{xvi},
 - *kurūkaka* (?)^{xvii},
 - ‘little bamboo’ (*veṇuka*)^{xviii},¹¹¹,
 - thorn apple (*karambha*)^{xix},
 - ‘big thorn apple’ (*mahākarambha*)^{xx},
 - ‘pleaser’ (*nandanā*)^{xxi},

gives a number of synonyms for *viṣayā*, almost none of which have any poisonous parts (Suvedī and Tivārī 2000: 5.77, 10.143). But one of them, *viṣāṇī* (also *meṣaśṛṅgī*), is sometimes equated with *Dolichandrone falcata* (DC.) Seemann (Sivara-jan and Balachandran 1994: 518), a plant used as an abortifacient and fish poison (Nadkarni 1982a: #862). This identification is tenuous.

111 Not poisonous.

vii unknown; see ?

viii unknown; see ?

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

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

xi ; see

xii ; see

xiii ; see

xiv ; see

xv unknown; see ?

xvi ?; see *Piper aurantiacum* Wall. (NK: #1924) is not poisonous.

xvii ?; see ?

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

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

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

xxi ?; see ?

- 'crow' (*kāka*)^{xxii},
- the flower-poisons include those of:
 - rattan (*vetra*)^{xxiii},
 - wild chinchona (*kādamba*)^{xxiv},
 - black pepper (*vallīja* → *marica*)^{xxv},
 - thorn apple (*karambha*)^{xxvi}, and
 - big thorn apple (*mahākarambha*)^{xxvii};
- the seven bark, pith (*sāra*) and resin (*niryāsa*) poisons are:
 - 'gutboiler' (*antrapācaka*)^{xxviii},
 - 'blade' (*kartariya*)^{xxix},
 - wild mustard (*sauryāka*)^{xxx},
 - emetic nut (*karaghāṭa* → *karahāṭa?* → *madana*)^{xxxi},
 - thorn apple (*karambha*)^{xxxii},
 - wild asparagus (*nandana* → *bahuputrā?*)^{xxxiii}, and
 - munj grass (*nārācaka*)^{xxxiv}; ¹¹²
- the three milky sap (*kṣīra*)-poisons are:
 - purple calotropis (*kumudaghni* → *arka?*)^{xxxv}, ¹¹³

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

113 The name of this poison, *kumuda-ghni*, means 'lotus killer'. In Sanskrit literature, the *kumuda* lotus is associated with the moon, since it blossoms by night. Since the sun

xxii ?; see ?

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

xxiv Anthocephalus cadamba, Miq.; see NK #204

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

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

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

xxvii unknown; see ?

xxix unknown; see ?

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

xxxi Randia dumetorum, Lamk.; see NK #2091

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

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

xxxi Saccharum bengalense, Retz.?; see NK #2184

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

- oleander spurge (*snuhī*)^{xxxvi}, and
- ‘web-milk’ (*jālakṣīri*)^{xxxvii};
- the two element (*dhātu*)-poisons are:
 - ‘foam-stone’ (*phenāśma*)^{xxxviii}, and
 - orpiment (*haritāla*)^{xxxix, 114}
- the thirteen tuber-poisons are:
 - jequirity (*kālakūṭa*)^{xl, 115}
 - wolfsbane (*vatsanābha*)^{xli},
 - Indian mustard (*sarṣapa*)^{xlii},
 - leadwort (*pālaka* → *citraka*)^{xliii},
 - ‘muddy’ (*kardama*)^{xliv}, the
 - ‘Virāṭa’s plant’ (*vairāṭaka*)^{xlvi},
 - nutgrass (*mustaka*)^{xlvi},

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.

114 Dutt (1922: 38–42) conjectured that ‘foam-stone’ may be impure white arsenic obtained by roasting orpiment.

115 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.

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

xxxvi unknown; see ?

xxxvii unknown; see ?

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

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

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

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

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

xliv unknown; see ?

xlvi unknown; see ?

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

- atis root (*śṛṅgīviṣa*)^{xlvii},
- sacred lotus (*prapuṇḍarīka*)^{xlviii},
- radish (*mūlaka*)^{xlix},
- ‘alas, alas’ (*hālāhala*)^l,
- ‘big poison’ (*mahāviṣa*)^{li}, and
- galls (*karkaṭa*)^{lii}.¹¹⁶

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 (*ādhmāna*) and sleep (*svāpa*).

The consumption of poisons from bark, pith (*sāra*) and resin (*niryāsa*) will cause foul breath, hoarseness (*pāruṣya*), a headache, and a discharge of phlegm (*kapha*).¹¹⁷

116 Leadwort root is a powerful poison. Nutgrass is tuberous, but non-toxic. Atis has highly toxic tuberous roots. Neither sacred lotus nor galls are toxic. The ‘alas, alas’ poison (*hālāhala*) is the mythical poison produced from the churning of the ocean at the time of creation: it occurs in medical texts such as the present one, and commentators identify it with one or other of the lethal poisons such as wolfsbane or jequirity. Agrawala (1963: 126) makes the intriguing suggestion that the word *hālāhala*, possibly to be identified with Pāṇini’s *hailihila* (P.6.2.38), may be of Semitic origin, although his evidence seems uncertain (Steingass (1930: 1506a) cites Persian *halāhil* ‘deadly (poison)’ as a loan from Sanskrit). Mayrhofer 1953–72: iii.585 also cites a claim for an Austro-Asiatic origin for the word.

117 At 1.2.6 (Su 1938: 11), Ḍaḥaṇa glosses hoarseness (*pāruṣya*) as *vāgrūṣatā*, “a rough, dry voice.”

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

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

xlix *Raphanus sativus*, L.; see NK #2098

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

li unknown; see ?

lii *Rhus succedanea*, L.; see NK #2136

The milky sap (*kṣīra*)-poisons make one froth at the mouth, cause loose stool, and make the tongue feel heavy.¹¹⁸ The element (*dhātu*)-poisons give one a crushing pain in the chest, make one faint and cause a burning feeling on the palate.

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

11–17 Symptoms of tuber poisoning

The tuber-poisons, though, are severe. I shall talk about them in detail. With jequirity (*kālakūṭa*)^{liii}, there is numbness and very severe trembling. With wolfsbane (*vatsanābha*)^{liv}, there is rigidity of the neck, and the faeces, and urine become yellow.

With sārṣapa (*sārṣapa*),¹¹⁹ the wind becomes defective (*vātavaiguṇya*), there is constipation (*ānāha*), and lumps (*granthi*) start to appear. With leadwort (*pālaka* → *citraka*)^{lv}, there is weakness in the neck, and speech gets jumbled.¹²⁰

With the one called 'muddy' (*kardama*)^{lvi}, there is a discharge (*praseka*), the faeces pour out, and the eyes turn yellow. The 'Virāṭa's plant' (*vairāṭaka*)^{lvii} 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*).¹²¹

- 15b With great aconite (*mahāviṣa*) one's limbs grow weak, there is a burning feeling and swelling of the belly.¹²²
- 16a With puṇḍarīka (*puṇḍarīka*), one's eyes go red, and one's belly becomes distended.¹²³
- 16b With mūlaka (*mūlaka*), one's body is drained of colour and the limbs are paralysed.¹²⁴
- 17a With hālāhala (*Aconite*), a man turns a dark colour (*dhyāma*), and gasps.¹²⁵
- 17b With atis root (*śṛṅgīviṣa*)^{lviii}, one gets violent knots (*granthi*) and

-> ativiṣa

Look up
the ca. ref-
erence.

- 118 At 6.54.10 (*Su 1938*: 773), Ḍalhaṇa glosses loose stool (*viḍbheda*) as *dravapurīṣatā*, “having liquid stool.”
- 119 *Sārṣapa* would normally mean “connected with mustard,” and excessive consumption of mustard oil can be harmful. However, the *Sauśrutaniḥṇṭu* (156) gives *rakṣoghṇā* as a synonym for *sarṣapā*. This can be *Semecarpus anacardium*, L.f., which has some poisonous parts.
- 120 The verse in the Nepalese version ends with a plural verb that does not agree with the dual of the sentence subject.
- 121 The substitution in MS NAK 5-333 affecting 15cd is caused by an eye-skip to the word *viṣeṇa* in 2.17. *Mustaka* commonly refers to *Cyperus rotundus*, L.; the root is used in āyurveda but is not poisonous. However other dictionaries list *mustaka* amongst serious poisons, for example *Rājanighaṇṭu* (22 v. 42) and *Rasaratnasamuccaya* 16, v. 80. However, its ancient identity is still doubtful.
- 122 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.
- 123 The word *puṇḍarīka* very commonly means sacred lotus, *Nelumbo nucifera*, Gaertn. The entire plant is edible and cannot be the poison intended here. Singh and Chuneekar (1972: 252) noted that this poison is unidentified and that it is also listed as a poison in *Carakasāṃhitā*. 23.12.
- 124 The word *mūlaka* very commonly means the radish, *Raphanus sativus*, L. The root is edible and cannot be the poison intended here. Singh and Chuneekar (1972: 317) noted that this poison is unidentified.
- 125 Identification of *hālāhala* is uncertain. It may simply be a mythical poison, or its specific identity may have been lost over the centuries. Late *nighaṇṭu*s identify it as *stomaka* = *vatsanābha*, i.e., *Aconitum napellus*, L. (*Soḍhalanighaṇṭu* p.43). Ḍalhaṇa 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.

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

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

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

lvi unknown; see ?

lvii unknown; see ?

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

- stabbing pains in the heart.¹²⁶
- 18a With markāṭa (*monkey*), one leaps up, laughs, and bites.¹²⁷
- 18b-19a Experts said that the thirteen cited highly potent tuber-poisons should be known to have possessed ten features:
- 19b-20a dry (*rūkṣa*), hot, sharp, rarified (*sūkṣma*), fast-acting, pervasive, expansive (*vikāśin*), limpid (*viśada*), light, and indigestible are the ten.
- 20b Because of their dryness they cause inflammation of the wind; their heat inflames the choler and blood. Because of their sharpness they unhinge the mind, and they cut through the connections with the sensitive points (*marman*). Because of being rarified they infiltrate and disconnect the parts of the body. Because they are fast-acting they kill quickly, and because of their pervasiveness they blend with one's physical constitution (*prakṛti*). Because they expand they destroy the humour (*doṣa*)s, element (*dhātu*)s, and the impurities. Because they are limpid they overflow, because they are light they are difficult to cure, and because they are indigestible they are hard to eliminate. And so they cause long suffering.
- 24 One can be certain that any poison which is instantly lethal, whether it be stationary, mobile, or artificial, will have all ten of these features.

Slow-acting poison

- 25 A poison, whether it be stationary, mobile, or artificial, which has not completely gone from the body, but which is worn out or damaged by anti-toxic medicine, or else dried up by blazing fire, wind, or sunshine, or which has just lost its virulence by itself, becomes a 'slow-acting poison (*dūṣṭviṣa*)'. Because it has lost its potency it is no longer lethal. It is surrounded by phlegm (*kapha*) and has an aftermath that lasts for years.
- 27 If he is suffering from this, his stools and complexion deteriorate, he gets bad breath and a nasty taste in his mouth, and is very thirsty. He faints, vomits, his speech is slurred, and he is depressed. Also, he has the symptoms of contaminated dropsy (*duṣyodara*).¹²⁸

126 Singh and Chuneekar (1972: 407) noted that *vatsanābha* and *śṛṅgīviṣa* are two different varieties of poisonous Aconites that are difficult to distinguish.

127 Singh and Chuneekar (1972: 299) said of *markāṭa*, "an unidentified vegetable poison." Cf. Suvedī and Tivārī 2000: v.36 for synonyms that lead to the non-toxic jujube tree.

128 'Contaminated dropsy' (*duṣyodara* or *dūṣyudara*) is described elsewhere as a condition

- 28 If it lodges in his stomach (*āmāśaya*), his wind and phlegm become diseased; if it lodges in his intestines (*pakvāśaya*), his wind and choler become diseased. The man's hair and body are ruined, and he looks like a bird whose wings have been chopped off.
- 29a-c If it lodges in one of the body tissue (*dhātu*)s such as the chyle (*rasa*), it causes the diseases that were described as arising from the elements, and it rapidly becomes inflamed on nasty days which are cold and windy.
- 29d-31 Now listen to the preliminary signs of such a case: sleepiness, heaviness, yawning, slackness (*viśleṣa*) and exhilaration (*harṣa*), and a chafing of the limbs (*aṅgamarda*). Next, it causes food-mania (*annamada*) and indigestion, appetite-loss (*arocaka*), round blotches (*maṇḍala*), skin disease (*koṭha*), and delirium (*moha*). The body tissues dwindle away (*kṣaya*), the feet, hands, and face get swollen, dropsy develops, and there is vomiting and diarrhoea. Perhaps his colour may drain away and he may faint or have irregular fever (*viṣamajvara*). It may cause heightened, powerful thirst.
- 32 These various disorders are of many different types: one poison may produce madness, while another one may cause constipation (*ānāha*), and yet another may deplete the semen. One may cause slurred speech, while another pallid skin disease (*kuṣṭha*).
- 33 Traditionally, 'slow-acting poison' (*dūṣī-viṣa*) is so called because it corrupts (*dūṣayate*) the body tissue (*dhātu*)s. This corruption is caused by repetitively keeping to certain locations, times, foods, and sleeping in the daytime.

34- The stages of slow poisoning

In the first shock of having taken a stationary poison, a person goes a brown colour, his tongue becomes stiff, he grows faint, and starts to gasp.

- 35 In the second, he trembles, collapses, has a burning feeling, as well as a sore throat. When the poison reaches the stomach (*āmāśaya*), it causes pain in the chest (*hṛd*).

- 36 In the third, the roof of his mouth goes dry, he gets violent shooting

which arises when women of ill-character mix nail clippings, hair, urine, faeces, or menstrual blood with a man's food, in order to gain power over him (2.7.11-13).

- pains (*śūla*) in the stomach (*āmāśaya*), and his eyes swell up and go a nasty, yellow colour.
- 37 In the fourth shock, it causes the stomach and intestines to sting (*toda*), he gets hiccups, a cough, a rumbling in the gut (*antra*), and his head becomes very heavy.
- 38 In the fifth he dribbles phlegm (*kapha*), is drained of colour, his joints crack (*parvabheda*), all his humours are inflamed, and he also has a pain in his belly (*pakvādhāna*).
- 39a In the sixth, his consciousness is annihilated and he completely loses control of his bowels.
- 39b In the seventh, his shoulders, back and loins break, and he is finished.

Remedies for the stages of slow poisoning

- 40 In the first shock of the poison, he should vomit and be sprinkled with cold water. Then he should be made to drink an antidote (*agada*) together with honey and ghee.
- 41a In the second, he should vomit as before, and then be given a purgative to drink.
- 41b In the third, it is good for him to drink an antidote and take a nasal medicine (*nasya*) as well as an eye salve (*añjana*).
- 42a In the fourth, he should drink a medical antidote mixed with oil.
- 42b In the fifth, he should be prescribed the antidote together with a decoction (*kvātha*) of honey and liquorice (*madhuka*)^{lix}.
- 43 In the sixth, the cure is the same as for diarrhoea. And in the seventh, he should have medicated powder blown up his nose, and after having a 'crow's foot' (*kākapada*)¹²⁹ cut made on his head, he should have a piece of bloody meat put on it.
- 44 In the intervals between each shock, assuming that the above actions

¹²⁹ Suśruta explains the term *avapīḍa* 'medicated nasal powder' as the procedure either of administering nasal drops (*avapīḍa*), or blowing medicated powder into the nose (4.40.44-46): it is particularly recommended for unconscious or incapable patients. The 'crow's-foot' procedure is also recommended later in the 'Section on Procedures' (5.5.24a) in cases of snake-bite. It is also described by Caraka (see p. ?? below).

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

- have been performed, one should give the patient cold porridge together with ghee and honey, to take away the poison.
- 45-46 Both kinds of poison are destroyed by a porridge prepared with the stewed juice (*niṣkvaṭha*) of the following: luffa (*koṣātakya*)^{lx}, migraine tree (*agnimantha*)^{lxi}, velvet-leaf (*pāṭhā*)^{lxii}, 'sun-creeper' (*sūryavallī* → *jīvantī*?)^{lxiii}, heart-leaved moonseed (*amṛtā*)^{lxiv}, myrobalan (*abhayā*)^{lxv}s, siris (*śirīṣa*)^{lxvi}, white siris (*kiṇihī*)^{lxvii}, selu plum (*śelu*)^{lxviii}, white clitoria (*giryāhvā*)^{lix}, the two kinds of turmeric (*rajanī*)^{lxx}, the two hogweed (*punarnavā*)^{lxxi}s (red and white), black cardamom (*hareṇu*)^{lxxii}, the three pungent spices (*trikaṭu*) (dried ginger (*śuṇṭhī*)^{lxxiii}, long pepper (*pippalī*)^{lxxiv}, and black pepper (*marica*)^{lxxv}), the two Indian sarsaparillas (*sārive*) (country sarsaparilla (*anantā*)^{lxxvi} and black creeper (*pāṇḍī*)^{lxxvii}) and country mallow (*balā*)^{lxxviii}.

-
- lx *Luffa cylindrica*, (L.) M. J. Roem. or *L. acutangula*, (L.) Roxb.; see ADPS 252, NK #1514 etc.
- lxi *Premna corymbosa*, Rottl.; see IMP 1927, ADPS 21, NK #2025, AVS 4.348; GJM 523: = *P. integrifolia/serratifolia*, L.
- lxii *Cissampelos pariera*, L.; see ADPS 366, NK #592, GJM 573, IMP 1.95; cf. AVS 2.277
- lxiii *Holostemma ada-kodien*, Schultes; see ADPS 195, AVS 3.167, NK #1242, IMP 3.1619
- lxiv *Tinospora cordifolia*, (Willd.) Hook.f. & Thoms.; see ADPS 38, NK #2472 & 624, Dastur #229
- lxv *Terminalia chebula*, Retz.; see ADPS 172, NK #2451, Potter 214
- lxvi *Albizia lebbeck*, Benth.; see AVS 1.81, NK #91
- lxvii *Albizia procera*, (Roxb.) Benth.; see GVDB 98, NK #93
- lxviii *Cordia myxa*, L. non Forssk.; see GJM 529 (2), IGP 291b, cf. IMP 3.1677f; cf. AVS 2.180 (*C. dichotoma*, Forst.f.), NK #672 (*C. latifolia*, Roxb.)
- lix *Clitoria ternatea*, L.; see AVS 2.129, NK #621
- lxx *Curcuma longa*, L.; see ADPS 169, AVS 2.259, NK #750
- lxxi *Boerhaavia diffusa*, L.; see ADPS 387, AVS 1.281, NK #363
- lxxii *Amomum subulatum*, Roxb.; see PVS Caraka 2.734, AVS 1.128, NK #154
- lxxiii *Zingiber officinale*, Roscoe.; see ADPS 50, NK #2658, AVS 5.435, IGP 1232
- lxxiv *Piper longum*, L.; see ADPS 374, NK #1928
- lxxv *Piper nigrum*, L.; see ADPS 294, NK #1929
- lxxvi *Hemidesmus indicus*, (L.) R. Br.; see ADPS 434, AVS 3.141-5, NK #1210
- lxxvii *Ichnocarpus frutescens*, (L.) R.Br. or *Cryptolepis buchanani*, Roemer & Schultes; see AVS 3.141, 3.145, 3.203, NK #1283, #1210, ADPS 434
- lxxviii *Sida cordifolia*, L.; see ADPS 71, NK #2297

47-49 The 'invincible' ghee

There is a famous ghee called 'Invincible' (*ajeya*). It rapidly destroys all poisons and 'always conquers'. It is made with a mash (*kalka*) of the following plants: liquorice (*madhuka*)^{lxxix}, Indian rosebay (*tagara*)^{lxxx}, costus (*kuṣṭha*)^{lxxxi}, deodar (*bhadradāru*)^{lxxxii}, black cardamom (*hareṇu*)^{lxxxiii}, Alexandrian laurel (*punnāga*)^{lxxxiv}, cherry (*elavāluka*)^{lxxxv}, cobra's saffron (*nāgapuṣpa*)^{lxxxvi}, water-lily (*utpala*)^{lxxxvii}, white clitoria (*sitā* → *śvetā*?)^{lxxxviii}, embelia (*viḍaṅga*)^{lxxxix}, sandalwood (*candana*)^{xc}, cassia cinnamon (*patra*)^{xci}, 'going-to-my-darling' (*priyaṅgu*)^{xcii}, rosha grass (*dhyāmaka*)^{xciii}, the two turmeric (ordinary turmeric (*rajanī*)^{xciv} and Indian barberry (*dāruharidrā*)^{xcv}), the two Indian nightshade (*br̥hatī*)s (poison berry (*br̥hatī*)^{xcvi} and yellow-berried nightshade (*kṣudrā*)^{xcvii}), the two Indian sarsaparillas (*sārive*) (country sarsaparilla (*anantā*)^{xcviii} and black creeper (*pālindī*)^{xcix}), beggarweed (*sthirā* → *śālapanī*)^c, and 'spotted-leaf' (*sahā*

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

lxxx *Tabernaemontana divaricata* (L.) R.Br. ex Roem. & Schultes.; see GJM 557, AVS 5.232

lxxx *Saussurea costus*, Clarke; see NK #2239

lxxx *Cedrus deodara*, (Roxb. ex D. Don) G. Don; see AVS 41, NK #516

lxxx *Alumomum subulatum*, Roxb.?; see PVS Caraka 2.734, AVS 1.128, NK #154

lxxx *Calophyllum inophyllum*, L.; see AVS 1.338, NK #425

lxxx *Prunus cerasus*, L.?; see BVDB 58, NK #2037

lxxx *Mesua ferrea*, L.; see NK #1595

lxxx *Nymphaea stellata*, Willd.; see GJM 528, IGP 790; Dutt 110, NK #1726

lxxx *Clitoria ternatea*, L.; see AVS 2.129, NK #621

lxxx *Embelia ribes*, Burm. f.; see ADPS 507, AVS 2.368, NK #929, Potter 113

xc *Santalum album*, L.; see ADPS 111, NK #2217

xci *Cinnamomum tamala*, (Buch.-Ham.) Nees; see AVS 2.84, NK #

xcii *Callicarpa macrophylla*, Vahl.; see AVS 1.334, NK #420

xciii *Cymbopogon martinii* (Roxb.) Wats; see AVS 2.285, NK #177

xciv *Curcuma longa*, L.; see ADPS 169, AVS 2.259, NK #750

xcv *Berberis aristata*, DC.; see Dymock 1.65, NK #685, GJM 562, IGP 141

xcvi *Solanum violaceum*, Ortega; see ADPS 100, NK #2329, AVS 5.151

xcvi *Solanum virginianum*, L.; see ADPS 100, NK #2329, AVS 5.164

xcvii *Hemidesmus indicus*, (L.) R. Br.; see ADPS 434, AVS 3.141-5, NK #1210

xcix *Ichnocarpus frutescens*, (L.) R.Br. or *Cryptolepis buchanani*, Roemer & Schultes; see AVS 3.141, 3.145, 3.203, NK #1283, #1210, ADPS 434

c *Desmodium gangeticum* (L.) DC; see Dymock 1.428, GJM 602, NK #1192; ADPS 382, 414 and AVS 2.319, 4.366 are confusing

→ *prśniparṇī*)^{ci}.

50–52 Curing the ‘slow-acting’ poison

Someone suffering from ‘slow-acting poison (*dūṣṭviṣa*)’ should be well sweated, and purged both top and bottom. Then he should in all cases be made to drink the following antidote which removes ‘slow-acting poison’:

Take long pepper (*pippalī*)^{cii}, rosha grass (*dhyāmaka*)^{ciii}, spikenard (*māmsī*)^{civ}, lodh tree (*śāvara* → *lodhra*)^{cv}, nutgrass (*paripelava* → *plava* → *mustā*?)^{cvi}, soda crystals (*suvarcikā* → *suvarjikā*)^{cvi}, cardamom (*sūkṣmailā*)^{cvi}, ‘scented pavonia’ (*toya* → *bālaka*)^{cix}, and ‘gold-chalk’ ochre (*kanakagairika*). This antitoxin, taken with honey, eliminates ‘slow-acting poison’. It is called ‘slow-acting poison antidote (*dūṣṭviṣāri*)’, and there is no situation where it is not recommended.

53–54 If there are any side-effect (*upadrava*)s, such as fever, a burning feeling, hiccups, constipation (*ānāha*), depletion of the semen, distension, diarrhoea, fainting, illness in the heart, bellyache (*jaṭhara*), madness, trembling, or others, then one should treat each one in its own terms, as well as using the anti-toxic medicines.

55 ‘Slow-acting poison’ is curable (*sādhya*) if caught immediately; it is treatable (*yāpya*) if it is of a year’s standing; but it cannot be cured in someone who has unhealthy habits or who is weak (*kṣīṇa*).

ci *Uraria lagopoides*, DC; see GJM 577, Dymock 1.426, IMP 1.750ff., NK #2542; ADPS 382, AVS 2.319 4.366 are confusing

cii *Piper longum*, L.; see ADPS 374, NK #1928

ciii *Cymbopogon martinii* (Roxb.) Wats; see AVS 2.285, NK #177

civ *Nardostachys grandiflora*, DC.; see NK #1691

cv *Symplocos racemosa*, Roxb.; see ADPS 279, NK #2420

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

cvi Sodium carbonate; see NK 2, p. 101

cvi Elettaria cardamomum, Maton; see AVS 2.360, NK #924, Potter 66

cix *Pavonia odorata*, Willd.; see ADPS 498, NK #1822

Thus ends the second chapter, called ‘on the knowledge of stationary poisons’, in the Procedures Section of Suśruta’s *Compendium*.

Abbreviations

- Ah 1939 Kumṭe, Aṇṇā Moreśvara, Navare, Kṛṣṇaśāstrī, and Parādkar, Hariśāstrī (1939) (eds.), श्रीमद्वाग्भटविरचितम् अष्टाङ्गहृदयम्, श्रीमद-
रुणदत्तविरचितया सर्वाङ्गसुन्दराख्यया व्याख्यया, हेमाद्रिप्रणीतया आयुर्वेदर-
सायनाह्वया टीकया च समुल्लसितम् = *The Astāṅgahṛidaya* (6th edn.,
Mumbayyām: Nirṇayasāgara Press), [ark:/13960/t3tt6967d](http://13960/t3tt6967d).
- Anup *Anup Sanskrit Library* (n.d.).
- Apte Apte, Vaman Shivaram (1992), *The Practical Sanskrit-English Dictionary* (Kyoto: Rinsen Book Company), ISBN: 4-653-00038-7; Reprinted from Gode and Karve 1957-9.
- AS *Asiatic Society* (n.d.).
- As 1980 Āṭhavale, Anaṃta Dāmodara (1980) (ed.), *Aṣṭāṅgasan̄grahaḥ. Śrīmad Vṛddhavāgbhaṭaviracitaḥ Induvyākhyāsahitaḥ* (Pune: Ma-
heśa Anaṃta Āṭhavale, Śrīmad Ātreya Prakāśanam), [ark:/13960/t9773bb9z](http://13960/t9773bb9z).
- Bhela 1921 Mookerjee, Ashutosh and Ananta Krishna Shastri, Ved-
antabisharad (1921) (eds.), *The Bhela Samhita. Sanskrit Text* (Calcutta: University of Calcutta), [ark:/13960/t3sv3157j](http://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-saṃhitā. 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 पुनर्व-
सुनोपदिष्टा, तच्छिष्येणाग्निवेशेन प्रणीता, चरकदृढबलाभ्यां प्रतिसंस्कृता च-
रकसंहिता, श्रीचक्रपाणिदत्तविरचितया आयुर्वेददीपिकाव्याख्यया संवलिता
(3rd edn., Mumbayyām: Nirṇaya Sagara Press), [URL](http://13960/t3sv3157j), accessed
01/01/2018.
- HIML Meulenbeld, Gerrit Jan (1999-2002), *A History of Indian Medical Literature*, 5 vols. (Groningen: E. Forsten), ISBN: 9069801248.
- 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 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-कल्पित आयुर्वेद. भगवता धन्वन्तरिणोपदिष्टः सुश्रुतनामधेयेन तच्छिष्येण विरचितः (3rd edn., Calcutta: Saratī Press), [ark : / 13960 / t1nh6j09c](#); [HIML](#): IB, 311, edition b.
- Su 1915 Ācārya, Yādavaśarma Trivikrama (1915) (ed.), सुश्रुतसंहिता, सुश्रुतेन विरचिता, वैद्यवरश्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया समुल्लसिता, आचार्योपाह्वेन त्रिविक्रमात्मजेन यादवशर्मणा संशोधिता = *The Sushrutasamhita of Sushruta, the Nibandhasangraha Commentary of Shri Dalhanāchārya* (Mumbayyām: Nirṇayasāgaramudrāyantrālaye), [ark : / 13960 / t3sv0mt50](#), accessed 29/07/2020; [HIML](#): IB, 312 edition *v.

- Su 1931 Ācārya, Yādavaśarma Trivikrama (1931) (ed.), सुश्रुत-संहिता, वैद्यवरश्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया समुल्लसिता, महर्षिणा सुश्रुतेन विरचिता, सूत्र-निदान-शारीर-चिकित्सा-कल्पस्थानोत्तरतन्त्रात्मकः. आचार्योपाह्वेन त्रिविक्रमात्मजेन यादवशर्मणा संशोधिता = *The Sushrutasaṃhitā of Sushruta with the Nibandhasangraha Commentary of Shree Dalhanāchārya* (2nd edn., Mumbayyām: Pāṇḍuraṅga Jāvajī at the Nirṇayasāgaramudrāyantrālaye), [ark : / 13960 / t9j41sg94](http://13960/t9j41sg94), accessed 09/06/2020; HIML: IB, 312 edition *v.
- Su 1938 Ācārya, Yādavaśarma Trivikrama and Ācārya, Nārāyaṇa Rāma (1938) (eds.), श्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया निदानस्थानस्य श्रीगयदासाचार्यविरचितया न्यायचन्द्रिकाख्यपञ्जिकाव्याख्यया च समुल्लसिता महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता (3rd edn., Bombay: Nirṇayasāgara Press), [ark : / 13960 / t09x0sk1h](http://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 निबन्धसंग्रहाख्यव्याख्यया निदानस्थानस्य श्रीगयदासाचार्यविरचितया न्यायचन्द्रिकाख्यपञ्जिकाव्याख्यया च समुल्लसिता (Vārāṇasī: Caukhambhā Kṛṣṇadāsa Akādamī); Reprint of the third, 1938 edition (Su 1938).
- Su 1939 Ācārya, Yādavaśarma Trivikrama and Śarman, Nandakiśora (1939) (eds.), सुश्रुतसंहितायाः सूत्रस्थानम्. श्रीचक्रपाणिदत्तविरचितया भानुमतीव्याख्याया समेतम् = *Sushrut-saṃhitā (sūtra Sthān) with Bhānumatī Commentary by Chakrapāṇi Datta with Introduction by Gaṇanāth Sen* (Śrīsvāmī Lakṣmīrāma Nidhi Granthamālā = Shri Swāmī Lakshmi Rām Trust Series, 1; [Jaipur]: Śyāmasundara Śarman), [ark : / 13960 / t54g0d12m](http://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 संवलिता = *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 Śrīkrṣṇadāsa at the Śrīveṅkaṭeśvara Steam Press), [ark :/ 13960 / t6qz6fr23](https://nopr.srikrishna.org/ark:/13960/t6qz6fr23); Lithograph format. Edited on the basis of a manuscript belonging to the astrologer Śudhākaraśarman of the Varanasi Sanskrit Pāṭhaśālā.

Index of Manuscripts

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

Kathmandu KL 699 [2](#)

Kathmandu NAK 1-1079 [2](#)

Kathmandu NAK 5-333 [2](#)

NAK 5-333 [41](#)

Thanjavur TMSSML 10773 [57](#)

References

Ācārya, Yādavaśarma Trivikrama (1941) (ed.), महर्षिणा पुनर्वसुनोपदिष्टा, तच्छिष्येणाग्निवेशेन प्रणीता, चरकदृढबलाभ्यां प्रतिसंस्कृता चरकसंहिता, श्रीचक्रपाणिदत्तविरचितया आयुर्वेददीपिकाव्याख्यया संवलिता (3rd edn., Mumbayyām: Nirṇaya Sagara Press), [URL](#), accessed 01/01/2018.

Ācārya, Yādavaśarma Trivikramācārya and Ācārya, Nārāyaṇa Rāma (1945) (eds.), महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता (मूलमात्रा). पाठान्तर-परिशिष्टादिभिः संवलिता = *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).
- 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/ZENODO.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 सूत्रस्थानात्मकम् हाराणचन्द्रचक्रवर्तिकविराजविरचितसुश्रुतार्थसन्दीपनभाष्य-समेतम्...चन्द्रकान्त भट्टाचार्य-प्रमुखैः संशोधितम् = [The *Suśrutasaṃhitā* with the Commentary *Suśrutārthasandīpanabhāṣya* by Hārāṇacandra Cakravartī] (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 *Suśrutasaṃhitā*', *Academia Letters*. DOI: [10.20935/AL2992](#).
- Birch, Jason, Wujastyk, Dominik, Klebanov, Andrey, Rimal, Madhusudan, et al. (2021), 'Dālhaṇa 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 (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](#); Bhelaśamhitā described on pp. 67 ff.
- Carpue, J. C. (1816), *An Account of Two Successful Operations for Restoring a Lost Nose from the Integuments 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 Roṣu 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](#).

- Deshpande, Vijaya (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](https://doi.org/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](#).
- 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.
- Edgerton, Franklin (1939), 'The Epic Triṣṭubh and Its Hypermetric Varieties', *Journal of the American Oriental Society*, 59/2: 159–74. DOI: [10.2307/594060](https://doi.org/10.2307/594060).
- 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](https://doi.org/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](https://doi.org/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 Publisher), 95–117.
- Gaṇapatiśāstrī, T. (1920–5), *Āryamañjuśrīmūlakalpāḥ* (Trivandrum Sanskrit Series, 70; Anantaśayane: Rājākīyamudraṇayantrālaye), [ark:/13960/t4pk5sj0j](https://nopr.scribd.org/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](https://nopr.scribd.org/document/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](https://doi.org/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](https://nopr.scribd.org/document/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](https://www.jstor.org/stable/2351087), 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](https://doi.org/10.4259/ibk.62.3_1087), [URL](https://www.jstor.org/stable/2351087), accessed 08/09/2019.
- (pre-published), '[Preliminary Edition of the Nepalese MSS of the Suśrutasaṃhitā, 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](https://doi.org/10.18732/h2ht0h).
- Hemarāja Śarman (1938) (ed.), काश्यपसंहिता (वृद्धजीवकीयं तन्त्रं वा) महर्षिणा मारीचकश्यपेनोपदिष्टा ... हेमराजशर्मणा लिखितेन विस्तृतेन उपोद्धातेन सहिता ... सत्यपाल भिषगा कृतया विद्योतिनी हिन्दीव्याख्यया ... समुल्लसिता (1st edn., Mumba: Nirṇayasāgara Press), [URL](https://www.jstor.org/stable/2351087), 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 Ayurvēdas: Id Est Medicinæ 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](https://www.jstor.org/stable/2351087), 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](https://nbn-resolving.org/urn:nbn:in:apn01-2019060113960-t05z1bg4q).
- (1897), *Suśrutasaṃhitā = The Suśruta-Saṃhitā or the Hindū System of Medicine According to Suśruta Translated from the Original Sanskrit* (Bibliotheca Indica, 911; Calcutta: Asiatic Society), [ark:/13960/t8pd1kw9r](https://nbn-resolving.org/urn:nbn:in:apn01-2019060113960-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 Suśruta’, *Journal of the Royal Asiatic Society of Great Britain and Ireland*: 283–302, [URL](https://nbn-resolving.org/urn:nbn:in:apn01-2019060113960-t8pd1kw9r), accessed 26/06/2019.
- (1906b), ‘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](https://nbn-resolving.org/urn:nbn:in:apn01-2019060113960-t8pd1kw9r), accessed 25/06/2019.
- (1907a), ‘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](https://nbn-resolving.org/urn:nbn:in:apn01-2019060113960-t8pd1kw9r), accessed 25/06/2019.
- (1907b), *Studies in the Medicine of Ancient India: Osteology or the Bones of the Human Body* (Oxford: Clarendon Press).
- Hofer, Theresia (2007), ‘Swami Laxmi Ram’s Ayurvedic Pharmacy in Jaipur, India’, *Wellcome History*, 34: 2–3, [URL](https://nbn-resolving.org/urn:nbn:in:apn01-2019060113960-t8pd1kw9r), 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](https://nbn-resolving.org/urn:nbn:in:apn01-2019060113960-t3ws9h63c).
- Jack, David Morton (1884), ‘A Thesis on Cataract in India: Its Pathology and Treatment’, Wellcome Library, London, MS.3007, [URL](https://nbn-resolving.org/urn:nbn:in:apn01-2019060113960-t8pd1kw9r), accessed 02/06/2021.
- Joṣī, Veṇīmādhavaśāstrī and Joṣī, Nārāyaṇa Harī (1968), *Āyurvedīya Mahākośaḥ arthāt Āyurvedīya Śabdakośaḥ Saṃskṛta–Saṃskṛta* (Mumbai: Mahārāṣṭra Rājya Sāhitya āṇi Saṃskṛti Maṇḍala), [URL](https://nbn-resolving.org/urn:nbn:in:apn01-2019060113960-t8pd1kw9r).

- Kangle, R. P. (1969), *The Kauṭīliya Arthaśāstra* (2nd edn., Delhi: Motilal Banarsidass), ISBN: 81-208-0042-7, [ark : / 13960 / t3gz6qh1s](https://nbn-resolving.org/urn:nbn:de:hbz:5:1-63868-p0042-7-9), 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](https://www.jstor.org/stable/2519911), accessed 25/06/2019, in *Zeitschrift Der Deutschen Morgenländischen Gesellschaft*, 1/62: 134–9, [URL](https://www.jstor.org/stable/2519911), accessed 17/04/2021.
- Klebanov, Andrey (2010), 'The *Nepalese Version of the Suśrutasamhitā and Its Interrelation with Buddhism and the Buddhists', MA thesis (Hamburg: Hamburg University, Sept.), [URL](https://www.hamburg.academia.edu/AndreyKlebanov), accessed 08/09/2019.
- (2021a), 'On the Textual History of the Suśrutasamhitā (1): A Study of Three Nepalese Manuscripts', to be published in *eJIM: Electronic Journal of Indian Medicine*, [URL](https://www.ejim.in/), accessed 09/09/2019.
- (2021b), 'On the Textual History of the Suśrutasamhitā, (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](https://nbn-resolving.org/urn:nbn:de:hbz:5:1-63868-p0042-7-9).
- 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](https://doi.org/10.21037/atm-2019-rcs-04), [URL](https://atm.annals.org/), accessed 02/11/2020.
- Lienhard, Siegfried (1978), 'On the Meaning and Use of the Word Indragopa', *Indologica taurinensia*, 6: 177–88, [URL](https://www.jstor.org/stable/2519911), 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](https://www.jstor.org/stable/2519911): 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).
- 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](#).
- (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 Vijayarākṣita 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](#).

- Meulenbeld, Gerrit Jan (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 European (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, 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](#).
- (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](https://doi.org/10.1515/9783110899344).
- Olivelle, Patrick (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](https://doi.org/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](https://doi.org/10.1093/acprof:osobl/9780199891825.003.0001).
- Pandey, Anshuman (2012), 'Proposal to Encode the Newar Script in ISO/IEC 10646', [URL](https://doi.org/10.1093/acprof:osobl/9780199891825.003.0001).
- Pass, Gregory (2003), *Descriptive Cataloging of Ancient, Medieval, Renaissance, and Early Modern Manuscripts* (Chicago: American Library Association), ISBN: 0-8389-8218-2, [URL](https://doi.org/10.1093/acprof:osobl/9780199891825.003.0001).
- 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](https://doi.org/10.1093/med/9780199204854.003.090302).
- (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](https://doi.org/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](https://doi.org/10.1093/acprof:osobl/9780199891825.003.0001).

- 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](https://doi.org/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](https://doi.org/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](https://nbn-resolving.org/urn:nbn:in:ccrsm:13960-t88h7763b).
- Rây, Priyadarshan, Gupta, Hirendra Nath, and Roy, Mira (1980), *Suśruta Saṃhita (a Scientific Synopsis)* (New Delhi: Indian National Science Academy), [ark : / 13960 / t64511t6v](https://nbn-resolving.org/urn:nbn:in:ccrsm: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.
- 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, Kamasāstra, Vaidya & Jyotisa, nos. 10650–11737* (Srirangam: Sri Vani Vilas Press), [ark : / 13960 / t3nw8bc12](https://nbn-resolving.org/urn:nbn:in:ccrsm:13960-t3nw8bc12).
- Śāstrī, Vardhamāna Pārśvanātha (1940) (ed.), उग्रादित्याचार्यकृत कल्याणकारक (राष्ट्रभाषानुवादसहित) = *The Kalyāṇa-kārikam of Ugrādityacharya, Edited with Introduction, Translation, Notes, Indexes and Dictionary* (Sakhārāma Nemacanda Gramthamālā, 129; Solāpura: Seṭha Goviṃdajī Rāvajī Doṣī), [ark : / 13960 / t2q617g4d](https://nbn-resolving.org/urn:nbn:in:ccrsm: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](https://nnparks.org/ark:/13960/t9870jt4g); Breton 1826: 358–363 cites Scott's description of cataract couching.
- Sena, Gaṅgāprasād et al. (1886–93) (eds.), सुश्रुतसंहिता...दल्लनाचार्य-कृत-निबन्ध-संग्रह, चक्रपाणिदत्त-कृत-भानुमती-टीका...वङ्गानुवाद...इरेजि प्रतिशब्द (Calcutta: Maṇirāma Press); Edition "g" in [HIML](https://sanskritdocuments.org/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](https://nnparks.org/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; Vārāṇasī: Caukhambā Orientalia).
- (1982), *Ḍalhaṇa and his Comments on Drugs* (Delhi: Munshiram Manoharlal).
- (1999–2001a), *Suśruta-Saṃhitā, with English Translation of Text and Ḍalhaṇa's Commentary Alongwith (sic) Critical Notes*, 3 vols. (Haridas Ayurveda Series, 9; Varanasi: Chaukhambha Visvabharati).
- (1999–2001b), *Suśruta-Saṃhitā, with English Translation of Text and Ḍalhaṇa's Commentary Alongwith (sic) Critical Notes*, 3 vols. (Haridas Ayurveda Series, 9; Varanasi: Chaukhambha Visvabharati).
- Shastri, R. Shama (1920) (ed.), बोधायनगृह्यसूत्रम् *The Bodhāyana Grihyasutra* (Mysore: University of Mysore), [ark:/13960/t2t492622](https://nnparks.org/ark:/13960/t2t492622).
- Singh, Thakur Balwant and Chuneekar, K. C. (1972), *Glossary of Vegetable Drugs in Brhatrayi* (Varanasi: Chowkhamba Sanskrit Series Office).
- 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. Rākshashkhāli (Sundarban) Plate; Śaka 1118', *Epigraphia Indica* (1953–54), 30: 42–3.

- Sivarajan, V. V. and Balachandran, Indira (1994), *Ayurvedic Drugs and Their Plant Sources* (New Delhi, Bombay, Calcutta: Oxford & IBH Publishing).
- Sleeman, W. H. (1893), *Rambles and Recollections of an Indian Official* (London: Constable), [ark:/13960/t22c4bx7w](https://n2t.net/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 Šānāq: 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 Tivārī, N. (2000) (eds.), *Sauśrutaniḥaṇṭuḥ: granthāḍau viśṭṛena granthavaiśiṣṭyaprakāśakenopodghātena avasāne ca dravyāṇām anekabhāṣānām āvalī- paryāyasaṅgrahābhyām samalaṅkṛtaḥ Suśrutas-aṃhitāyām prayuktānām auśadhadravyāṇām paryāya-guṇakarmavarṇātmako pūrvagranthaḥ* (Belajhuṇḍī, Ḍāṇ: Mahendrasaṃskṛtaviśvavidyālayaḥ).
- Tavernier, Jean-Baptiste (1684), *Collections of Travels through Turkey (sic), into Persia, and the East-Indies* (London: M. Pitt).
- The Unicode Consortium (1991–2020), 'The Unicode Standard 13.0, NewaRange: 11400–1147F', [URL](https://unicode.org/versions/13.0/), accessed 20/07/2021.
- Thorburn, S. S. (1876), *Bannu; or Our Afghan Frontier* (London: Trübner & Co.), [URL](https://www.india.gov.in/publications/11400-1147F), accessed 10/09/2019; Reprinted Lahore: Niaz Ahmad, 1978.
- 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 Sanskrit and Prākṛta Manuscripts in the Library of the Bombay Branch of the Royal Asiatic Society* (Bombay: Royal Asiatic Society, Bombay), [ark:/13960/t53g00h0n](https://nbn-resolving.org/urn:nbn:in:apsara-01-2019-0001); Biswas #0115.
- 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).
- Watt, George (1889–96), *A Dictionary of the Economic Products of India* (Calcutta: Dept. Revenue and Agriculture, Government of India), [URL](https://nbn-resolving.org/urn:nbn:in:apsara-01-2019-0001), 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](https://nbn-resolving.org/urn:nbn:in:apsara-01-2019-0001).
- 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](https://nbn-resolving.org/urn:nbn:in:apsara-01-2019-0001).
- 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](https://nbn-resolving.org/urn:nbn:in:apsara-01-2019-0001).
- 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](https://nbn-resolving.org/urn:nbn:in:apsara-01-2019-0001).
- Wujastyk, Dagmar (2012), *Well-mannered Medicine: Medical Ethics and Etiquette in Classical Ayurveda* (New York: Oxford University Press). doi: [10.1093/acprof:oso/9780199856268.001.0001](https://nbn-resolving.org/urn:nbn:in:apsara-01-2019-0001).
- (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](https://nbn-resolving.org/urn:nbn:in:apsara-01-2019-0001), 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](https://nbn-resolving.org/urn:nbn:in:apsara-01-2019-0001).

- 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](#).
- 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](https://doi.org/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

'gold-chalk' ochre
kanakaḡairika 47
'invincible'
ajeya 46

Aconite
hālāhala 41
ādhmāna
distension 39
agada
antidote 44
ajeya
'invincible' 46
āmāśaya
stomach 43f
ānāha
constipation 40, 43, 47
aṅgamarda
chafing of the limbs 43
añjana
eye salve 44
annamada
food-mania 43
antidote
agada 44
antra
gut 44
appetite-loss
arocaka 43
arocaka
appetite-loss 43
avapīḡa
nasal drops 44

belly
pakvādhāna 44
bellyache
jaṭhara 47
body tissue
dhātu 43
brhatī

indian nightshade
46
chafing of the limbs
aṅgamarda 43
chest
hṛd 43
chyle
rasa 43
constipation
ānāha 40, 43, 47
crow's foot
kākapada 44
curable
sādhya 47
dark colour
dhyāma 41
decoction
kvātha 44
delirium
moha 39, 43
dhātu
body tissue 43
element 35, 38, 40, 42
dhyāma
dark colour 41
discharge
praseka 40
distension
ādhmāna 39
doṣa
humour 42
dry
rūkṣa 42
dūṣīviṣa
slow-acting poison
47
dūṣīviṣāri
slow-acting poison
antidote 47
dwindle away
kṣaya 43

element
dhātu 35, 38, 40, 42
exhilaration
harṣa 43
expansive
vikāśin 42
eye salve
añjana 44
food-mania
annamada 43
granthi
knots 41
lumps 40
great aconite
mahāviṣa 41
great poison
mahāviṣa 41
gut
antra 44
hālāhala
Aconite 41
harṣa
exhilaration 43
hoarseness
pāruṣya 39
hṛd
chest 43
humour
doṣa 42
indian nightshade
brhatī 46
indian sarsaparillas
sārive 45f
intestines
pakvāśaya 43
irregular fever
viṣamajvara 43
jaṅgama
mobile 35

jaṭhara
 bellyache 47
 joints crack
parvabheda 44

kākapada
 crow's foot 44
kalka
 mash 46
kanakagairika
 'gold-chalk' ochre
 47
kapha
 phlegm 39, 42, 44
 knots
granthi 41
koṭha
 skin disease 43
kṣaya
 dwindle away 43
kṣīṇa
 weak 47
kṣīra
 milky sap 35, 37, 40
kuṣṭha
 pallid skin disease
 43
kvātha
 decoction 44

 limpid
viśada 42
 loose stool
viḍbheda 41
 lumps
granthi 40

mahāviṣa
 great aconite 41
 great poison 41
maṇḍala
 round blotches 43
markaṭa
 monkey 42
 mash
kalka 46

milky sap
kṣīra 35, 37, 40
 mobile
jaṅgama 35
moha
 delirium 39, 43
monkey
 markaṭa 42
mūlaka
mūlaka 41
mūlaka
mūlaka 41
 mustaka
mustaka 40
mustaka
 mustaka 40

 nasal drops
avapīḍa 44
 nasal medicine
nasya 44
nasya
 nasal medicine 44
niryāsa
 resin 35, 37, 39
niṣkvātha
 stewed juice 45

pakvādhāna
 belly 44
pakvāśaya
 intestines 43
 pallid skin disease
kuṣṭha 43
pāruṣya
 hoarseness 39
parvabheda
 joints crack 44
 phlegm
kapha 39, 42, 44
 pith
sāra 35, 37, 39
pralāpa
 ranting 39
praseka
 discharge 40

puṇḍarīka
puṇḍarīka 41
puṇḍarīka
puṇḍarīka 41

 ranting
pralāpa 39
 rarified
sūkṣma 42
rasa
 chyle 43
 resin
niryāsa 35, 37, 39
 round blotches
maṇḍala 43
rūkṣa
 dry 42

sādhya
 curable 47
sāra
 pith 35, 37, 39
sārīve
 indian sarsaparillas
 45^f
sārṣapa
 sārṣapa 40
sārṣapa
 sārṣapa 40
 side-effect
upadrava 47
 skin disease
koṭha 43
 slackness
viśleṣa 43
 sleep
svāpa 39
 slow-acting poison
 antidote
dūṣṭviṣāri 47
 slow-acting poison
dūṣṭviṣa 47
 stationary
sthāvara 35
 stewed juice
niṣkvātha 45

sthāvara
stationary 35
sting
 toda 44
stomach
 āmāśaya 43f
sūkṣma
 rarified 42
svāpa
 sleep 39
śvāsa
 wheezing 39
three pungent spices
 trikaṭu 45
toda

sting 44
treatable
 yāpya 47
trikaṭu
 three pungent
 spices 45
udveṣṭana
 writhing 39
upadrava
 side-effect 47
viḍbheda
 loose stool 41
vikāśin
 expansive 42

viśada
 limpid 42
viṣamajvara
 irregular fever 43
viśleṣa
 slackness 43
weak
 kṣīṇa 47
wheezing
 śvāsa 39
writhing
 udveṣṭana 39
yāpya
 treatable 47

Todo list

■ Cf. Arthaśāstra 1.21.8.	25
■ I'm still unhappy about this verse.	28
■ Mention this in the introduction as an example of the scribe knowing the vulgate.	28
■ fn about sadyas+	28
■ Bear's bile instead of deer's bile.	29
■ punarṇṇavā in the N & K MSS	30
■ śrita for śṛta	30
■ explain more	31
■ Medical difference from Sharma.	31
■ example where the vulgate clarifies that these should be used separately; appears to be a gloss inserted into the vulgate text.	31
■ 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.	32
■ √vyadh not √vedh (also elsewhere and for the ears), causative optative.	32
■ opposite of the vulgate Same as As 1.8.89 (As 1980: 79).	32
■ Medical difference.	32
■ Expected (Pillay 2010): Croton tiglium, L. = Naepala, Jayapala, kanakaphala, titeriphala (NL #720); Calotropis spp.; Citrullus colocynthus (colocynth); Ricinus communis (castor);	35
■ Note about Gayī's edition.	35
■ -> ativiṣa	41
■ Look up the ca. reference.	41
■ where is cutting with a knife related to removing bile or phlegm.	33
■ maṣī burned charcoal. Find refs.	33
■ find ref.	39
■ Check out these refs.	40
■ or a dual?	44

Draft of March 11, 2022 for private study only