

A Translation of the New Edition of the
Suśrutasamhitā

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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.

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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 (*saurīyaka*)^{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 (*kumudaghñī* → *arka?*)^{xxxv}, ¹¹³

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

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

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*)^{xlvi},
- sacred lotus (*prapuṇḍarīka*)^{xlvi},
- 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."

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

xlvi *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

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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 *Sauśrutaniḥṣaṇṭu* (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 *Carakaśaṅgihitācī*. 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 *nighaṇṭus* 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 The ten are:
- dry (*rūkṣa*),
 - hot,
 - sharp,
 - rarified (*sūkṣma*),
 - fast-acting,
 - pervasive,
 - expansive (*vikāśin*),
 - limpid (*viśada*),
 - light, and
 - indigestible.
- 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

¹²⁶ Singh and Chuneekar (1972: 407) noted that *vatsanābha* and *śṛṅṅīviṣa* 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.

- 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
- 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' (*dūṣṭ-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.

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

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 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

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

- a 'crow's foot (*kākapada*)' cut made on his head, he should have a piece of bloody meat put on it.¹²⁹
- 44 In the intervals between each shock, assuming that the above actions 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 (*niṣkṣvātha*) 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

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).

- 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

(*anantā*)^{lxxvi} and black creeper (*pāṇḍī*)^{lxxvii} and country mallow (*balā*)^{lxxviii}.

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*)^{lxxxii}, deodar (*bhadradāru*)^{lxxxiii}, black cardamom (*hareṇu*)^{lxxxiv}, Alexandrian laurel (*punnāga*)^{lxxxv}, cherry (*elavāluka*)^{lxxxvi}, cobra's saffron (*nāgapuṣpa*)^{lxxxvii}, water-lily (*utpala*)^{lxxxviii}, white clitoria (*sitā* → *śvetā*?)^{lxxxix}, embelia (*viḍaṅga*)^{lxxxix}, sandalwood (*candana*)^{xc}, cassia cinnamon (*patra*)^{xc}, '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 (*bṛhatī*)s (poison berry (*bṛhatī*)^{xcvi} and yellow-berried nightshade (*kṣudrā*)^{xcvii}), the two Indian sarsaparil-

- lxxv *Hemidesmus indicus*, (L.) R. Br.; see ADPS 434, AVS 3.141-5, NK #1210
lxxvi *Ichnocarpus frutescens*, (L.) R.Br. or *Cryptolepis buehneri*, Roemer & Schultes; see AVS 3.141, 3.145, 3.203, NK #1283, #1210, ADPS 434
lxxvii *Sida cordifolia*, L.; see ADPS 71, NK #2297
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 *Deodrus deodara*, (Roxb.ex D.Don) G. Don; see AVS 41, NK #516
lxxx *Amomum subulatum*, Roxb.?.; see PVS Caraka 2.734, AVS 1.128, NK #154
lxxx *Galophyllum 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
xc *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

las (*sārive*) (country sarsaparilla (*anantā*)^{xcviii} and black creeper (*pālindī*)^{xcix}), beggarweed (*sthirā* → *śālaparṇī*)^c, and ‘spotted-leaf’ (*sahā* → *prśniparṇī*)^{ci}.

50–52 Curing the ‘slow-acting’ poison

Someone suffering from ‘slow-acting poison’ (*dūṣṭviṣa*)^{cii} 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 (*māṃsī*)^{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*)^c, 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

xcviii *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

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

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*).

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 आयुर्वेद-
सायनाह्वया टीकया च समुल्लसितम् = *The Astāṅgahṛidaya* (6th edn.,
Mumbayyām: Nirṇayasāgara Press), ark:/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-
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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://url), 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.
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- 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.
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- 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).
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- TMSSML *Tanjore Maharaja Serfoji Saraswati Mahal Library* (n.d.).

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■ 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
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■ 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

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