

# The *Suśrutasamhitā* on the Plastic Surgery of the Ears and Nose: The Nepalese Recension

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## Contents

<b>Introduction</b>	<b>3</b>
Preliminaries . . . . .	3
Aim of the Article . . . . .	3
Importance of 1.16 in the History of Medicine . . . . .	3
<b>The Sanskrit Text</b>	<b>9</b>
The Nepalese Version . . . . .	9
The Printed Editions . . . . .	9
The Vulgate . . . . .	9
The sources of the 1915 edition . . . . .	9
The sources of the 1931 edition . . . . .	10
The sources of the 1938 edition . . . . .	10
Evaluation . . . . .	11
The 1939 edition . . . . .	12
Evaluation . . . . .	15
Differences Between the Nepalese Version and the Vulgate . . . . .	15



<b>The Edition</b>	<b>16</b>
Manuscripts . . . . .	16
Features of the manuscript transmission . . . . .	16
Palaeographical features . . . . .	16
Chart of characters . . . . .	16
Editorial Principles . . . . .	16
<b>The Translation</b>	<b>17</b>
Sūtrasthāna, adhyāya 16 . . . . .	17
<b>Abbreviations</b>	<b>25</b>
<b>Index of Manuscripts</b>	<b>27</b>
<b>References</b>	<b>28</b>
<b>Glossary</b>	<b>38</b>

# Introduction

## Preliminaries

### Aim of the Article

### Importance of 1.16 in the History of Medicine

Simple forms of surgery have a long history in South Asia. In works datable to at least 1200 BCE we learn how a reed was used as a catheter to cure urine retention.<sup>1</sup> Cauterization too was used to prevent wounds from bleeding. The *Brāhmaṇa* literature of the early first millennium BCE contains more detailed descriptions of animal butchery in the context of religious sacrifice that involved the enumeration of internal organs and bones.<sup>2</sup> This exemplifies an early Sanskrit vocabulary for internal parts of bodies, but it is not the same as medical dissection, whose methods and purpose is quite different.<sup>3</sup> With *The Compendium of Suśruta* (*Suśrutasaṃhitā*) we find ourselves in the presence of something quite different and more developed, in which the body was studied specifically for medical and surgical purposes.<sup>4</sup> The *Compendium* gives us a historical window onto a school of professionalised surgical practice which existed almost two millennia ago, and which in its day was perhaps the most advanced school of surgery in the world.

*The Compendium of Suśruta* described how a surgeon should be trained and how various operations should be done. There are descriptions of ophthalmic couching (the dislodging of the lens of the eye), perineal lithotomy (cutting for stone in the bladder), the removal of arrows and splinters, suturing, the examination of dead human bodies for the study of anatomy, and much else.<sup>5</sup> Suśruta claims that surgery is the most ancient and most efficacious of the eight branches of medical knowledge (1.1.15–19). Many

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1 Zysk 1985: 70–71.

2 Malamoud 1996.

3 Keith (1908) pointed out that the enumeration of the bones in the *Brāhmaṇas* was derived from correspondences with the numbering of various verse forms, not from anatomical observation.

4 Zysk 1986.

5 Wilson 1823; Mukhopādhyāya 1913; Deshpande 2000; Wujastyk 2003; Narayana and Thrigulla 2011 and many other studies.

details in his descriptions could only have been written by a practising surgeon: it is certain that elaborate surgical techniques were a reality in Suśruta's circle.

I have argued elsewhere that in spite of Suśruta's elaborate descriptions, there is little historical evidence to show that these practices persisted beyond the time of the composition of Suśruta's *Compendium* (**wuja-indi**). A few references to surgery found in Sanskrit literature between the fourth to the eighth centuries CE were collected by **shar-indi**. But the stereotypical nature of most of these references, and the paucity of real detail, suggests that the practice of surgery was rare in this period.

There is some evidence, however, that although surgery ceased to be part of the professional practice of traditional physicians of the *vaidya* castes, it migrated to practitioners of the 'barber-surgeon' type. As such, it was no longer supported by the underpinning of Sanskrit literary tradition, and so it becomes harder to find historical data about the practice. **sirc-raks** discusses some epigraphical evidence for the heritage and migrations of the 'Ambaṣṭha' caste, who appear to have functioned as barber-surgeons in South India and later migrated to Bengal. There is also evidence from the eighteenth century of the practice of smallpox inoculation by traditional '*ṭikādars*' (**holw-acco**; **coul-acco**). And some other surgical techniques which sound similar to those described in Suśruta, for example for removing ulcers, were observed in the same period (**babe-scie**).

While the theoretical aspects of surgery continued to appear in those medical textbooks which tried to be comprehensive, in practice those who applied the surgical techniques seem to have been increasingly isolated from mainstream of āyurvedic practice. It may be that as the caste system grew in rigidity through the first millennium CE, taboos concerning physical contact became almost insurmountable and *vaidyas* seeking to enhance their status may have resisted therapies that involved intimate physical contact with the patient, or cutting into the body. On the other hand, against this hypothesis it may be argued that the examination of the pulse and urine gained in popularity, as did massage therapies.

An example of this process may be the famous ophthalmic operation of couching for cataract, which is first described in Suśruta's *Compendium* (**majn-heal**). A description of this operation survives in the ninth-century *Kalyāṇakāraka* composed in eastern India by the Jaina author Ugrāditya (**Meulenbeld1984**). This procedure, or one very similar to it, also appears

to have reached China, but probably through transmission by Buddhist pilgrim monks, rather than trained Indian physicians (**unsc-medi**). But by the beginning of the twentieth century it was described by **elli-indi** as long having been carried out by traditional practitioners of the barber-surgeon type rather than by physicians trained in the Sanskrit texts.

By the seventeenth century, foreign visitors to India began to remark on how surgery was virtually non-existent in India. The French traveller Tavernier, for example, reported in 1684 that once when the King of Golconda had a headache and his physicians prescribed that blood should be let in four places under his tongue, nobody could be found to do it, 'for the Natives of the Country understand nothing of Chirurgery'.<sup>6</sup>

The famous 'Indian rhinoplasty' operation is often cited as evidence that Suśruta's surgery was widely known in India even up to comparatively modern times. This operation took place in March 1793 in Poona and was ultimately to change the course of plastic surgery in Europe and the world. A Maratha named Cowasjee, who had been a bullock-cart driver with the English army in the war of 1792, was captured by the forces of Tipu Sultan, and had his nose and one hand cut off.<sup>7</sup> After a year without a nose, he and four of his colleagues who had suffered the same fate submitted themselves to treatment by a man who had a reputation for nose repairs. Unfortunately, we know little of this man, except that he was said in one account to be of the brick-maker's caste. Thomas Cruso (d. 1802) and James Findlay (d. 1801),<sup>8</sup> senior British surgeons in the Bombay Presidency, witnessed this operation (or one just like it). They appear to have prepared a description of what they saw, together with a painting of the patient and diagrams of the skin graft procedure. These details, with diagrams and an engraving from the painting, were published at third hand in London in 1794;<sup>9</sup> Fig. ?? shows the illustration that accompanied this article. The key innovation was the grafting of skin from the site immediately adjacent to the repair-site, while keeping the graft tissue alive and supplied with blood through a connective skin bridge. Subsequently, through the publication

6 **tave-trav**; cf. also **slee-ramb**.

7 A residual puzzle with this account is that 'Cowasjee' is a Parsi name, not a Maratha one.

8 **cowasjee** calls the second surgeon 'Trindlay' but this must be an error. **carp-acco** has 'Findlay', and both surgeons appear in **craw-roll**.

9 **cowasjee**.

by **carp-acco** describing his successful use of the technique, this method of nose-repair gained popularity amongst British and European surgeons.

Carpue received personal accounts of other witnesses to this operation, and others of the same ilk, which shed more light on this episode (**carp-acco**). Carpue's chief informant in 1815 was Cowasjee's commanding officer, Lieutenant-Colonel Ward. Ward described the surgeon not as a brick-maker, but as an 'artist', whose residence was four hundred miles distant from Poona. Cowasjee was not the only patient: four friends who had suffered the same fate also underwent nose reconstruction by the same artist. Most interestingly, the understanding in Poona at the time of the operation was that this artist-surgeon, who also claimed expertise in repairing torn or split lips, was the only one of his kind in India, and that the art was hereditary in his family.

Further evidence on this topic is given by the seventeenth-century traveller Niccolo Manucci (fl. 1639–ca. 1709), who described how Shah Jahan's soldiers in Kashmir in the 1630s customarily cut off people's noses as a form of punishment (**manu-stor**). Even more interestingly, Manucci described rhinoplasty operations which took place in Bijapur in about 1686:

The surgeons belonging to the country cut the skin of the forehead above the eyebrows and made it fall down over the wounds on the nose. Then, giving it a twist so that the live flesh might meet the other live surface, by healing applications they fashioned for them other imperfect noses. There is left above, between the eyebrows, a small hole, caused by the twist given to the skin to bring the two live surfaces together. In a short time the wounds heal up, some obstacle being placed beneath to allow of respiration. I saw many persons with such noses, and they were not so disfigured as they would have been without any nose at all, but they bore between their eyebrows the mark of the incision.<sup>10</sup>

This passage provides an important historical precursor to the Poona operation. It also raises interesting questions of its own. What did Manucci mean by 'surgeons'? Was he referring to practitioners of the 'barber-surgeon' type, or to āyurvedic vaidyas?

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<sup>10</sup> **manu-stor**. I am grateful to Mike Miles (**mile-march1999**) for bringing this passage to my attention.

The technique used by the Bijapur and Poona surgeons was similar, but not identical, to that described in Suśruta's *Compendium* (see translation, p. ??). Suśruta's version has the skin flap being taken from the patient's cheek: Cowasjee's was taken from his forehead, in the same manner as that of the Bijapur patients. The Sanskrit text of Suśruta's description is brief, and does not appear to be detailed enough to be followed without an oral commentary and practical demonstration, although an experienced surgeon might be able to discern the technique even so. However, no surviving manuscript of the text contains any illustration. In fact, there appears to be no tradition of anatomical or surgical manuscript illustration in India at all before about the eighteenth century. It is hard to see how such techniques could have persisted purely textually.

Perhaps the Bijapur and Poona operations were indeed extraordinary survivals of a technique from Suśruta's time, but in that case it seems to have been transmitted through channels outside the learned practice of traditional Indian physicians. And it remains an important historical problem to discover just when, in the long centuries between Suśruta and Manucci, the new mode of performing this operation developed.

**Torn ear lobes** Suśruta's description of the repair of torn ear lobes is again unique for its time. **majn-heal** notes that 'through the habit of stretching their earlobes, the Indians became masters in a branch of surgery that Europe ignored for another two thousand years'. The different types of mutilated ear lobe which Suśruta describes are not always easy to understand from the Sanskrit: illustrations from Majno's text are reproduced to help visualization (pp. ??, ??).

One of the subjects unfortunately not covered in the present book is Suśruta's use of ants for suturing (Su.4.2.56). The technique, which is also described by Caraka (Ca.6.13.188), is to bring the edges of the flesh to be joined close together, and then allow a large black ant to bite the join with its mandibles. The ant's body is twisted off, and the head remains in place, clamping the join together. This technique has been described in detail and illustrated by **majn-heal**. Majno describes how this method is also known from tribal societies in Brazil and the Congo. Most interestingly, he cites an entomologist's report of the technique being known in southern Bhutan, in the early 1970s (**majn-heal**). The technique was known in the Islamic and European world through the famous and much-translated

surgical text by the Iberian Arab scholar Albucasis (d. 1013) (**spin-albu**). Majno notes that Albucasis knew the technique from Suśruta. Although Majno demonstrates conclusively that the technique is practicable, it is interesting that both Suśruta and Albucasis refer to the technique as a matter of hearsay.



## The Sanskrit Text

## The Nepalese Version

## The Printed Editions

The careful survey of printed editions of the *Suśrutasamhitā* by Meulenbeld lists no fewer than 44 entries.<sup>11</sup> These range from the first edition by Madhusūdana Gupta (1835) to editions in the 1970s. The number of reprints and editions since that time might almost double that number. Translations begin with Hessler's Latin translation in 1844 and continue up to the present in scores of publications in many languages.<sup>12</sup>

## The Vulgate

The great ayurvedic scholar Yādavaśarman Trivikrama Ācārya produced three successive editions of the *Suśrutasamhitā* with the commentary of Ḍaḥaṇa, in 1915, 1931 and 1938. These editions, especially the last, are generally considered the most scholarly and reliable editions of the work, and have been constantly reprinted up to the present day.<sup>13</sup> We refer to the last of these editions as "the vulgate."

The 1915 edition was based on three manuscripts. The 1931 edition used another seven manuscripts plus two printed editions. For his final 1938 edition, Ācārya used a further three manuscripts.<sup>14</sup> These sources are described as follow, with an overview in Table 1.

## The sources of the 1915 edition

- 1 Calcutta, Royal Asiatic Society. Covers the *sūtra*, *nidāna*, *śārīra* and *kalpa sthānas*.
- 2 Jaipur, Pandit Gaṅgādharaḥṭṭaśarman, lecturer at the Royal Sanskrit University. Covers the *cikitsāsthāna* and the *uttaratantra*.

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<sup>11</sup> [HIML](#): IIB, 311–314.

<sup>12</sup> E.g., [HIML](#): IIB, 314–315; Zysk 1984.

<sup>13</sup> See also the study of these editions by Klebanov (2021a: §1.2) and Wujastyk (2013: 143–144).

<sup>14</sup> The following account of the sources is paraphrased from Y. T. Ācārya and N. R. Ācārya's own account of his sources ([Su 1938](#): 22).

- 3 Bundi, my great friend the royal physician Paṃ. Śrīprasādaśarman  
Covers the *uttaratantra*.

### The sources of the 1931 edition

- 1 Vārāṇasī, professor of literature, the great Gaurīnāthapāthaka. With the *Nibandhasaṅgraha*. Covers the *nidānasthāna* and *uttaratantra*.
- 2 Ahmedabad. My friend Sva. Vā. Vaidya Raṇachoḍalāla Motīlālaśarman. With the *Nibandhasaṅgraha*. Covers the *śārīrasthāna*.
- 3 From the personal library of my great friend Sva. Vā. Vaidya Murārājīśarman. Extremely old. No commentary. Covers the *śārīrasthāna*.
- 4 Puṇe, BORI library. With the *Nibandhasaṅgraha*. Covers the *śārīrasthāna*.<sup>15</sup>
- 5 Puṇe, BORI library. With the *Nibandhasaṅgraha*. Complete. With some damaged folia.
- 6 Bombay, Asiatic Society. Incomplete.<sup>16</sup>
- 7 Varanasi, the private library of Vaidya Tryambakaśāstrī. Covers the *cikitsāsthāna*. The variant readings of this MS were compiled by Prof.
- 8 A printed edition together with the commentary *Suśrutasaṃdīpana-bhāṣya* by Professor Hārāṇacandra Cakravārtti. Complete work. This is the 1910 Calcutta edition numbered “t” by Meulenbeld ([HIML: IB, 312](#)).<sup>17</sup>
- 9 A printed edition of the first 43 chapters of the *sūtrasthāna*, printed in Bengali script, with the commentaries *Bhānumatī*, *Nibandhasaṅgraha*, edited by Vijayaratnasena and Nīśikāntasena. This is the 1886 Calcutta edition numbered “g” by Meulenbeld ([HIML: IB, 311](#)).<sup>18</sup>

### The sources of the 1938 edition

- 1 Gwalior, from the library of my great friend Paṃ. Rāmeśvaraśāstrin Śukla. Covers the *sūtra*, *nidāna*, *śārīra*, *cikitsā* and *kalpasthānas*.

<sup>15</sup> Not one of the three MSS of the *śārīrasthāna* described in H. D. Sharma 1939.  
<sup>16</sup> Possibly MS Mumbai AS B.I.3 or MS Mumbai AS B.D.109 (Velankar 1925–30: v. 1, # 212 and 213). But both these have the *Nibandhasaṅgraha*. The first covers only the *śārīrasthāna*; the second may be complete, but Velankar calls it only “disorderly.”  
<sup>17</sup> Bhaṭṭācārya 1910–7.  
<sup>18</sup> Sena et al. 1886–93.

Table 1: The sources of Yādavaśarman T. Ācārya's three editions: manuscript coverage (●) and print coverage (○).

edition source	1915			1931									1938		
	1	2	3	1	2	3	4	5	6	7	8	9	1	2	3
<i>sthāna</i>															
<i>sū.</i>	●							●	?		○	○ <sup>19</sup>	●		●
<i>nī.</i>	●			●				●	?		○		●	●	●
<i>śā.</i>	●				●	●	●	●	?		○		●		●
<i>cī.</i>		●						●	?	●	○		●		● <sup>20</sup>
<i>ka.</i>	●							●	?		○		●		
<i>utt.</i>		●	●	●				●	?		○				

- 2 Bikaner, from the library of the Royal Palace, supplied by Paṃ. Candraśekharaśāstrin. Contains the commentary *Nyāy-acandrikāpañjikāvyaḥkhyā* by Gayadāsa. Covers the *nidānasthāna*.

This is almost certainly MS Bikaner Anup 4390.<sup>21</sup>

- 3 Kathmandu, located in the private library of the Royal Guru Hemarāja Śarman. An extremely old palm-leaf manuscript. Readings from this MS were compiled by Paṃ Nityānandaśarman Jośi and sent to Ācārya. Covers from the beginning of the work to the end of the ninth chapter of the *cikitsāsthāna*. The siglum for this manuscript in footnotes was ता for तालपत्रपुस्तके.

## Evaluation

Estimates show that there are approximately 230 extant manuscript witnesses for the *Suśrutasaṃhitā*.<sup>22</sup> Many of these manuscripts cover only one or more of its chapters. Nevertheless, this is an order of magnitude more evidence than was considered by Ācārya for his vulgate editions.

<sup>19</sup> Covers chapters 1–43 only.

<sup>20</sup> Covers chapters 1–9 only.

<sup>21</sup> See Dominik Wujastyk, "MS Bikaner AnupLib 4390." *Pandit*. <<http://panditproject.org/entity/108068/manuscript>>.

<sup>22</sup> This figure is arrived at by summing the MSS mentioned in NCC and in the NGMCP. The real figure could be many scores higher.

While the descriptions provided by Ācārya of his source materials seems at first to be moderately comprehensive, Table 1 reveals the underlying paucity of textual sources for these editions. At first, it appears that fifteen manuscripts were consulted. However, we quickly see that two of the sources were other people's printed editions, and one of those covered less than a quarter of the work (no. 9 of 1931). That reduces the manuscript base to 13 manuscripts. Ācārya does not appear to have seen two of the manuscripts at all, having been sent collations prepared for him by others (7 of 1931 and 3 of 1938). Thus, Ācārya's final edition was based on the personal consultation of eleven partial manuscripts. One of them remains unidentified (6 of 1931). Only a single manuscript covers the whole of the *Suśrutasamhitā*, no. 5 of the 1931 edition. Manuscript 1 of 1938 is the next most complete, but it omits the *uttaratantra*, which comprises a third of the work. Manuscript 1 of the 1915 edition is third in size, but it still omits both of the longest chapters, and thus offers less than half the work. For the rest, the evidence is spotty, with each part of the work being supported by only between four and eight manuscripts, excluding the printed editions.

Two sources stand out for their historical importance. The first is no. 3 of 1931, which Ācārya calls "extremely old." It covered the *śārīrasthāna* only, and unfortunately we know nothing of the later history of this manuscript. The second is no. 3 of 1938, which is one of the important Nepalese manuscripts being considered in the present project. Ācārya's remarks and references to Hemarājaśarman's introduction to the *Kāśyapasaṃhitā* allow us to identify this manuscript as MS Kathmandu NAK 5-333.<sup>23</sup> But that manuscript covers the whole work, not just up to the ninth chapter of the *cikitsāsthāna* as Y. T. Ācārya and N. R. Ācārya stated.<sup>24</sup> Perhaps the editors only received collations for this portion of the manuscript and did not know that it was a witness for the whole work.

### The 1939 edition

In 1939, Yādavaśarman Trivikrama Ācārya and Nandakiśora Śarman co-edited an edition of the *sūtrasthāna* of the *Suśrutasamhitā* that was published by the Swami Laxmi Ram ayurvedic centre in Jaipur, and printed at the

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

24 *Su 1938*: 22.

famous Nirṇayasāgara Press in Mumbai (see Fig. 1).<sup>25</sup> The text was edited on the basis of the following sources.

#### For the *Bhānumatī*

1. A printed edition. Covered the *Bhānumatī* up to chapter Su.sū.40. The siglum was मु for *mudrita*.<sup>26</sup>
2. A manuscript in the India Office Library library provided through the Bhandarkar Oriental Research Institute in Pune.<sup>27</sup> This manuscript covered the *Bhānumatī* b up to the end of the *sūtrasthāna*. The siglum was ह for हस्तलिखित.<sup>28</sup>

#### For the *Suśrutasaṃhitā*

1. A palm leaf manuscript from Hemarājaśarman's personal library.<sup>29</sup> The siglum was ता for ताडपत्र.
2. His own published edition. The siglum was ड for डल्हणसंमतः पाठः.<sup>30</sup>
3. Hārāṇacandra Cakravartī's published edition with his own commentary.<sup>31</sup> The siglum was हा.

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

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

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

28 Wujastyk [2021](#)

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

29 I.e., MS Kathmandu NAK 5-333.

30 [Su 1938](#). It is noteworthy that Ācārya refers to his 1938 edition as representing “the Dalhaṇa recension.”

31 Bhaṭṭācārya [1910–7](#).

चरके—“लभोपायो हि शस्तानां रसावीनां रसायनम्” (च. चि. अ. १ पा. १) । पारिशेष्याद्वाजीकरणतन्त्रम् । अवाजिनं वाजीकुर्वन्ति येन तद्वाजीकरणम् । ‘अन्येषामपि दृश्यते’ (पा. अ. ६।३।१३७) इति धीर्घत्वम् । येन वाऽत्यर्थं स्त्रीषु व्यज्यते तद्वाजीकरणम् । तदुक्तं चरके—“येन नारीषु सामर्थ्यं वाजिवल्लभते नरः । प्रजेन्नाप्यधिकं येन वाजीकरणमेव तत्” (च. चि. अ. २, पा. ४) इति ॥ ५ ॥

अथास्य प्रत्येकाङ्गलक्षणसमासः—तत्र, शल्यं नाम विविधतृणकाष्ठ-पाषाणपांशुलोदलोष्टास्थिवालनखपूयास्त्रावदुष्टव्रणान्तर्गर्भशल्योद्धरणार्थं षष्ठ्या विधानैः, यन्त्रशस्त्रक्षाराग्निप्रणिधानव्रणविनिश्चयार्थं च; शालाक्यं नामोर्ध्वजत्रुगतानां श्रवणनयनवदनघ्राणादिसंश्रितानां व्याधीनामुपशमनार्थं; कायचिकित्सा नाम सर्वाङ्गसंश्रितानां व्याधीनां ज्वररक्तपित्तशोफोन्मादापसारकुष्ठमेहातिसारादीनामुपशमनार्थं; भूतविद्या नाम देवांसुरगन्धर्वयक्षरक्षःपितृपिशाचनैरागग्रहाद्युपसृष्टचेतसां शान्तिकर्मबलिहरणादिग्रहोपशमनार्थं; कौमारभृत्यं नाम कुमारभरणघात्रीक्षीरदोषसंशोधनार्थं दुष्टस्तन्यग्रहसमुत्थिनां च व्याधीनामुपशमनार्थम्; अगदतन्त्रं नाम सर्पकीटलृतामूषकादिदृष्टविषव्यञ्जनार्थं विविधविषसंयोगोपशमनार्थं च; रसायनतन्त्रं नाम वयःस्थापनमायुर्मेधावलंकरणं रोगापहरणसमर्थं च; वाजीकरणतन्त्रं नामारूपदुष्टक्षीणशुष्करेतसामाप्यार्थेनप्रसादोपचयजनननिमित्तं प्रहर्षणजननार्थं च ॥ ६ ॥

शल्यग्रविशेषाश्च शालुं प्रतिलक्षणं संक्षेपेणाह—अथास्येत्यादि । एकमेकमङ्गं प्रति लक्षणानां समासः संक्षेपः प्रत्येकाङ्गलक्षणसमासः । तृणादीनां, तथा दुष्टव्रणस्य, तथाऽन्तर्गत(र्भशल्य)स्य उद्धरणार्थमिति प्रत्येकमुद्धरणशब्दः संबध्यते । दुष्टव्रणस्यान्तस्तृणाद्याहरणार्थमित्यन्ये । षष्ठ्या विधानैरिति द्विव्रणीयोचैरपतर्पणाद्यै रक्षाविधानान्तैः; इत्थंभूतलक्षणे तृतीया । जत्रु ग्रीवामूलं, जत्रुण ऊर्ध्वमूर्ध्वजत्रु । घ्राणादीत्यादिग्रहणाच्छिरःकपालादिग्रहणम् । उत्तरतन्त्रे प्रतिपादितक्रमप्राप्त्या ज्वरानन्तरमतीसारः पठितः, तस्यान्ते पाठोऽतिसारस्य सर्वाङ्गीणदोषारब्धत्वात्, अन्येषामपि तन्मध्यपाठेन सर्वाङ्गीणदोषारब्धत्वप्रतिपादनार्थतिक्रमं वदन्ति । शान्तिकर्म बलिहरणादिना ग्रहाणां देवादीनामुपशमो यस्तदर्थः; यदि वा ग्रहणं ग्रहो देवानामावेशस्तदुपशमार्थम् । दुष्टस्तन्यग्रहसमुत्थितानामिति दुष्टस्तन्येन

१ ‘सर्वशरीरावस्थितानां’ व्याधीनामुपशमकरणार्थं, ज्वरशोफयुग्मरक्तपित्तोन्मादापसार-प्रमेहातीसारादीनां च’ इति ता. । २ ‘देवदानव’ इति ता. । ३ ‘विनायकनागग्रहोप-सृष्टचेतसां’ इति ता. । ४ ‘विषवेगोपशमनार्थं’ इति ता. । ५ ‘शुक्राप्यायन’ इति ता. । ६ ‘घ्राणादीनां शल्यान्तानां’ इति सु. । ७ ‘अन्ये तु तस्यान्ते पाठेन’ इति पा० । ८ ‘ग्रहणाद्’ इति सु. ।

Figure 1: A page of the 1939 *Bhānumatī* edition, showing the variant readings in the footnotes.

## Evaluation

The main innovation of this publication was to present the only surviving part of the commentary on the *Suśrutasaṃhitā* by the great eleventh-century medical scholar Cakrapāṇidatta, namely the *Bhānumatī*.<sup>32</sup> A secondary purpose was to present the text of the *sūtrasthāna* as read in MS Kathmandu NAK 5-333, that had recently been brought to the editors' attention. In their judgement, the Kathmandu manuscript presented a text that was closer to what Cakrapāṇidatta had before him than the text according to Ḍalhaṇa. This was the first *Suśrutasaṃhitā* edition in which Ācārya used sigla to identify the sources from which variant readings were reported, so while it has limitations, it for the first time enables us to get some idea of origins of the text (see Figure 1).

Ācārya noted in his introduction that the manuscripts containing the Ḍalhaṇa's commentary all came together with the root-text of the *Suśrutasaṃhitā*, and thus the main *Suśrutasaṃhitā* text reflected the readings chosen by Ḍalhaṇa. But the manuscripts of the *Bhānumatī* contained the commentary alone, without the root-text, and had many explanations based on different readings of the root-text than those of Ḍalhaṇa. In many of these cases it was hard to know what the text that Cakrapāṇidatta had before him. But Ācārya noted that Cakrapāṇidatta had a text before him that had much in common with the text of the Nepalese manuscript.<sup>33</sup>

There is compelling evidence that Cakrapāṇidatta's *Bhānumatī* commentary once covered the whole text of the *Suśrutasaṃhitā*.<sup>34</sup> The loss of the rest of the work ranks amongst the greatest disasters in Āyurvedic literature. Remarkably, the whole *Bhānumatī* may still have existed in the early twentieth century. In 1903, Palmyr Cordier reported being privately informed of a complete copy of the work in a personal manuscript collection in Benares.<sup>35</sup>

## Differences Between the Nepalese Version and the Vulgate

As exemplified by SS.1.16.

<sup>32</sup> HIML: IA, 374–375 and IB, 495–496.

<sup>33</sup> Su 1939: 3–4. See discussion by Klebanov (2021b: 7).

<sup>34</sup> HIML: IA, 375.

<sup>35</sup> Cordier 1903: 332.

## **The Edition**

### **Manuscripts**

#### **Features of the manuscript transmission**

##### **Palaeographical features**

- śrita for śṛta.
- ś and s in KL 699.
- b and v in KL 699 and NAK 5-333.
- cha and ccha
- line-fillers
- ṇ for n (punarṇavā)

##### **Chart of characters**

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

### **Editorial Principles**



## The Translation

### Sūtrasthāna, adhyāya 16

- 1 Now we shall expound the method for piercing the ear.<sup>36</sup>
- 2 One may pierce a child's ears for the purpose of preserving and decorating. On renowned days, half days, hours and constellations during the first half of the sixth or seventh lunar month, the boy who has received a benediction (*kṛtamaṅgala*), – blessings pronounced (*svastivācana*)<sup>37</sup> – should be placed on the lap of a wet-nurse.<sup>38</sup> Then, while pacifying him and having pulled his ear with the left hand, the physician should use his right hand to pierce the ear straight through at a naturally occurring

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- 36 The topic of piercing the ear (*kaṇṇavyadha*) is not discussed in the *Carakasamhitā* (HIML: IB, 326, n. 175), but it is mentioned in some texts that followed the *Suśruta-samhitā*, such as the *Kaśāpyasamhitā* (HIML: IIA, 30). Also, the instrument for piercing the ear is described in the *Aṣṭāṅgahṛdayasūtra* 1.26.26 (Ah 1902: 153). In the versions of the text known to Ḍalhaṇa (Su 1938: 76) and Cakrapāṇidatta (Su 1939: 125), the heading of this chapter is *kaṇṇavyadhabandhavidhi* ('the method of piercing and joining the ear'), instead of the Nepalese version's *kaṇṇavyadha*. The topic of *kaṇṇabandha* is discussed in passages 17–20 of the Nepalese version. However, it appears that only subsequent redactors reflected its importance by including it in chapter headings. The Nepalese version also omits the opening remark on Dhanvantari that appears in subsequent versions. For a discussion of the frame story in the Nepalese version, see Birch et al. 2021. Ḍalhaṇa (Su 1938: 76) and Cakrapāṇidatta (Su 1939: 125) state that only the ears of healthy people should be pierced, and they quote Bhoja to affirm this: 'When piercing the ears of children who are free of disease at these times, their ear flaps and apertures, as well as limbs, increase' (for the Sanskrit, see Su 1938: 76).
- 37 The syntax here is unclear. The expression *svastivācana* may have been a gloss inserted into the text at an earlier period to clarify *maṅgala*. But as it stands, it is not syntactically connected to the rest of the sentence. In the versions of 1.16.3 known to Cakrapāṇidatta (Su 1939: 126) and Ḍalhaṇa (Su 1938: 76), the words are united in a compound that reads more naturally.
- 38 The versions of 1.16.3 known to Cakrapāṇidatta (Su 1939: 126) and Ḍalhaṇa (Su 1938: 76) have the additional compound *kumāradharāṇike* ('on the lap of one who holds the child') after *dhātṛyaṇike*. The gender of *kumāradhara* is made clear by Ḍalhaṇa's gloss 'a man who holds the child'. Also, both versions add *bālakṛīḍanakaiḥ pralobhya* ('having enticed with children's toys') to indicate that the child should be enticed with toys to stay on the assistant's lap. According to Ḍalhaṇa on 1.16.3 (Su 1938: 76), the toys include replica elephants, horses, bulls and parrots. Ḍalhaṇa further mentions that others read *bhakṣyaviśeṣair vā* ('or by special treats') before *bālakṛīḍanakaiḥ*.

- cleft.<sup>39</sup> For a boy, do the right ear first; for a girl, do the left one. Use a needle on a thin ear; an awl (*ārā*) on a thick one.<sup>40</sup>
- 3 If there is excess blood or pain one should know that it was pierced in the wrong place. The absence of side-effects is a sign that it has been pierced in the right place.<sup>41</sup>
- 4 In this context, if an ignorant person accidentally pierces a duct (*sirā*) there will be fever, burning, swelling (*śvayathu*), pain, lumps (*granthi*), paralysis of the nape of the neck (*manyāstambhā*), convulsions (*apatānaka*), headache or sharp pain in the ear.<sup>42</sup>
- 5 Having removed the wick (*varti*) in the hole because of the aggravation of humours or a culpable piercing,<sup>43</sup> one should smear it with a paste of the roots of barley, liquorice, Indian madder (*mañjiṣṭhā*), and the castor oil tree (*gandharvahasta*), thickened with honey and ghee. When it has healed well, one should pierce it again.

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- 39 The versions of 1.16.3 of Cakrapāṇidatta ([Su 1939](#): 126) and Ḍalhaṇa ([Su 1938](#): 76) add *ādityakarāvabhāsite* to clarify that this naturally occurring cleft is illuminated by sunshine.
- 40 Ḍalhaṇa on 1.16.3 ([Su 1938](#): 76) clarifies that the awl is a shoe-maker's knife for piercing leather.
- 41 At this point, MS Kathmandu KL 699 is missing a folio, so the rest of this chapter is constructed on the basis of witnesses MS Kathmandu NAK 5-333 and MS Kathmandu NAK 1-1079.
- 42 This passage is significantly augmented in 1.16.4 of Cakrapāṇidatta's version ([Su 1939](#): 126) and 1.16.5 of Ḍalhaṇa's ([Su 1938](#): 77) to outline the specific problems caused by piercing three ducts called *kālikā*, *marmikā* and *lohitikā*. In fact, the order of the problems mentioned in the Nepalese version has been retained in the other versions and divided between each duct. Cakrapāṇidatta's commentary on 1.16.4 ([Su 1939](#): 126) cites several verses attributed to Bhoja on the problems caused by piercing these three ducts in the ear flap: '*Lohitikā*, *marmikā* and the black ones are the ducts situated in the earflaps. Listen in due order to the problems that arise when they are pierced. Paralysis of the nape of the neck and convulsions, or sharp pain arise from piercing *lohitikā*. Pain and lumps are thought to arise from piercing *marmikā*. Piercing *kālikā* gives rise to swelling, fever and burning.'
- 43 In addition to these reasons, 1.16.5 of Cakrapāṇidatta's version ([Su 1939](#): 126–127) and 1.16.6 of Ḍalhaṇa's ([Su 1938](#): 77) add *kliṣṭajihmāpraśastasūcīvyadhāt* ('because of piercing with a painful, crooked and unrecommended needle') and *gāḍhataravartitvāt* ('because of a wick that is too thick'). Ḍalhaṇa was aware of the reading in the Nepalese version because he notes in his commentary on 1.16.6 ([Su 1938](#): 77) that some read 'because of the accumulation of humours' rather than 'because of piercing with a painful, crooked and unrecommended needle or because of a wick that is too thick.' On the meaning of *samudāya*, see ?? and Meulenbeld [1992](#): 1–5.

- 6 One should treat the properly-pierced ear by sprinkling it with raw sesame oil. After every three days one should apply a thicker wick (*varti*) and sprinkle oil right on it.<sup>44</sup>
- 7 Once the ear is free from humours or side-effects, one should loosen it with a light dilator (*pravardhanaka*) in order to enlarge it.<sup>45</sup>
- 8 A person's ear enlarged in this way can split in two, either as a result of the humours<sup>46</sup> or a blow. Listen to me about the joins (*sandhāna*) it can have.
- 9 Here, there are, in brief, fifteen ways of mending the ear flap.<sup>47</sup> They are as follows: Rim-join (*nemīsandhānakaḥ*), Lotus-splittable (*utpalabhedyaka*), Dried Flesh (*vallūraka*), Fastening (*āsaṅgima*), Cheek-ear (*gaṇḍakarṇa*), Take away (*āhārya*), Ready-Split (*nirvedhima*), Multi-joins (*vyāyojima*), Door-hinge (*kapāṭasandhika*), Half door-hinge (*ardhakapāṭasandhika*), Compressed (*saṃkṣipta*), Reduced-ear (*hīnakarṇa*), Creeper-ear (*vallīkarṇa*), Stick-ear (*yaṣṭīkarṇa*), and Crow's lip (*kākauṣṭha*).<sup>48</sup>

In this context, among these,

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

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

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

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

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- 44 The manuscripts support the reading *sthūlatarīm* that is either a non-standard form or a scribal error.
  - 45 Cakrapāṇidatta on 1.16.6 (Su 1939: 127) and Ḍalhaṇa on 1.16.8 (Su 1938: 77) point out that the dilator can be made of wood, such as that of the prickly chaff flower (*apāmarga*), the neem tree (*nimba*) and the cotton plant (*kārpāsa*). Ḍalhaṇa adds that it can also be made of lead (*sīsaka*) and should have the shape of the datura flower (*dhattūrapuṣpa*).
  - 46 Ḍalhaṇa on 1.16.9 (Su 1938: 77) notes that the word *doṣa* here can refer to either a humour, such as wind (*vāta*), as we have understood it, or a disease generated from a humour.
  - 47 The Nepalese version uses the word *sandhāna* to refer to joining a split in an ear flap, which is consistent with the terminology in the verse cited above (8). However, 1.16.10 of Ḍalhaṇa's version (Su 1938: 77) uses the term *bandha* here and at the very beginning of the chapter (i.e., 1.16.1) to introduce the topic of repairing the ear.
  - 48 For an artist's impression of these different kinds of joins in the ear flap, see Majno 1975: 290 (reproduced as Figure 3.2 in Wujastyk 2003: 154).

“Cheek-ear” (*gaṇḍakarna*): one flap is longer on the outside.<sup>49</sup>

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

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

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

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

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

“These ten options (*vikalpa*) for joins (*sandhi*) of the ear should be bound. They can mostly be explained as resembling their names.<sup>50</sup> The five from compressed (*saṃkṣipta*) on are incurable.<sup>51</sup> Among these, “compressed” has a dry ear canal and the other flap is small. “Reduced ear” has flaps that have no base and have wasted flesh on their edges. “Creeper-ear” has flaps that are thin and uneven. “Stick-ear” has lumpy (*granthita*) flesh and the flaps are stretched thin and have stiff (*stabdha*) ducts (*sirā*). “Crow-lip” has a flap without flesh with compressed (*saṃkṣipta*) tips and little blood. Even when they are bound up, they do not heal because they are hot, inflamed, suppurating (*srāva*), or swollen.<sup>52</sup>

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

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

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

52 The version of 1.16.11–13 known to Ḍalhaṇa (Su 1938: 78) has four verses (*śloka*) at this point that are not in the Nepalese manuscripts. The additional verses iterate the types of joins required for ear flaps that are missing, elongated, thick, wide, etc. All four verses were probably absent in the version of the *Suśrutasaṃhitā* known to Cakrapāṇidatta. He cites the verses separately in his commentary, the *Bhānumatī* (Su 1939: 128–129), introducing each one as ‘some people read’ (*ke cit paṭhanti*). How-

- 10 A person wishing to perform any of these joins should therefore gather together the supplies prepared according to the recommendations of the ‘Preparatory Supplies’ chapter.<sup>53</sup> And in particular, he should gather decanted liquor (*surāmaṇḍa*), milk, water, fermented rice-water (*dhānyāmla*), and powdered earthenware crockery (*kapālacūrṇa*).<sup>54</sup> Next, he should prepare the woman or man, who have had the ends of their hair tied up, have eaten lightly, and are firmly supported by qualified attendants. Then, he should ready the bindings (*bandha*) and carry out the procedure with cutting (*chedya*), splitting (*bhedyā*), scarification (*lekhyā*), or piercing (*vyadhana*). Then, he should examine the blood of the ear to know whether it is tainted (*duṣṭa*) or not. If it is tainted by wind, the ear should be bathed with fermented rice-water (*dhānyāmla*) and water; if tainted by choler, then cold water and milk should be used; if tainted by phlegm, then decanted liquor (*surāmaṇḍa*) and water should be used, and then he should scarify it again. Then, arranging the join in the ear so that it is neither proud, depressed, nor uneven, one should make the join. Having seen that the blood has stopped, one should anoint it with honey and ghee, bandage each ear with cotton (*picu*) and gauze (*prota*), and bind it up with a thread, neither too tightly nor too loosely. Then, the earthenware powder should be sprinkled on, and medical advice (*ācārika*) given. And he should supplement with food as taught in the ‘Two Wound’ chapter.<sup>55</sup>
- 11 One should avoid rubbing, sleeping during the day, exercise, overeating, sex, getting hot by a fire, or the effort of speaking.
- 12 One should not make a join when the blood is too pure, too copious, or too thin.<sup>56</sup> For when the ear is tainted by wind, then it is obstruc-

ever, in Trikamajī Ācārya’s edition of the *Sūtrasthāna* of the *Bhānumatī*, the root text is largely identical to the one commented on by Ḍalhaṇa (Su 1938), even in instances like this where Cakrapāṇidatta’s commentary indicates that he was reading a different version of the *Suśrutasamhitā*.

53 *Suśrutasamhitā* 1.5 (Su 1938: 18–23).

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

55 *Suśrutasamhitā* 4.1 (Su 1938: 396–408).

56 1.16.17 of Ḍalhaṇa’s version (Su 1938: 79) reads “impure” for the Nepalese “too pure,” which would appear to make better medical sense. Emending the text to *nāśuddha-* for *nātīśuddha-* in the Nepalese recension would yield the same meaning as the Ḍalhaṇa’s

ted by blood (*raktabaddha*), unhealed and will peel. When tainted with choler, it becomes pinched (*gāḍha*), septic (*pāka*) and red. When tainted by phlegm, it will be stiff (*stabdha*) and itchy. It has excessively copious suppuration (*srāva*) and is *śopha* (*puffed up*). It has a small amount of wasted (*kṣīṇa*) flesh and it will not grow.<sup>57</sup>

13 When the ear is properly healed and there are no complications, one may very gradually start to expand it. Otherwise, it may be inflamed (*saṃrambha*), burning, septic or painful. It may even split open again.

14 Now, massage for the healthy ear, in order to enlarge it. One should gather as much as one can the following: a monitor lizard (*godhā*, scavenging (*pratuda*) and seed-eating (*viṣkira*) birds, and creatures that live in marshes or water,<sup>58</sup> fat, marrow, milk, and sesame oil, and white mustard oil.<sup>59</sup> Then cook the oil with an admixture (*prativāpa*) of the following: purple calotropis (*arka*, white calotropis (*alarka*, country mallow (*balā*, ‘strong Indian mallow’ (*atibalā*, country sarsaparilla (*anantā* beggarweed (*vidāri*, liquorice (*madhuka*), hornwort (*jalaśūka* → *jalanīlikā*<sup>60</sup>), items having the ‘sweet’ savour (*madhuravarga*<sup>61</sup>) and ‘milk flower’ (*payasyā* → *vidārī*<sup>62</sup>). This

version.

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

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

59 1.16.19 of Ḍalhaṇa’s version (Su 1938: 79) includes ghee (*sarpis*). However, Ḍalhaṇa’s remarks on 1.16.19 and Cakrapāṇidatta’s on 1.16.18 (Su 1939: 130) indicate that they knew a version of this recipe (perhaps, similar to the Nepalese) that does not have ghee. Ḍalhaṇa also notes that others simply read four oils, beginning with fat and without milk, whereas Cakrapāṇidatta says some read that it is made with four oils and milk.

60 *Ceratophyllum demersum*, L. This name is not certain. In fact, Ḍalhaṇa on 1.16.19 (Su 1938: 79) notes that some people interpret it as a poisonous, hairy, air-breathing, underwater creature.

61 The items which exemplify the ‘sweet’ savour (*madhuravarga*) are enumerated at SS.1.42.11.

62 *Pueraria tuberosa* (Willd.) DC. The version of 1.16.19 known to Ḍalhaṇa (Su 1938: 79) adds several ingredients to this admixture, including *apāmārga*, *aśvagandhā*, *kṣīraśuklā*, *madhuravarga* and *payasyā*. Also, it has *vidāriḡandhā* instead of *vidāri*. When commenting on 1.16.19, Ḍalhaṇa (Su 1938: 79) notes that some do not read *madhuravarga* and *payasyā*. Therefore, there were probably other versions of this recipe with fewer in-



- should then be deposited in a well-protected spot.
- 15 The wise man who has been sweated should rub the massaged (*ma-rdita*) ear with it. Then it will be free of complications, and will enlarge properly and be strong.<sup>63</sup>
  - 16 Ears which do not enlarge even when sweated and oiled, should be scarified at the edge of the hole (*apāṅga*), but not outside it.<sup>64</sup>
  - 17 In this tradition, experts know countless repairs to ears. So a physician who is very intent (*suniviṣṭa*) on working in this way may repair (*yojayed*) them.<sup>65</sup>
  - 18 If an ear has grown hair, has a nice hole, a firm join, and is strong and even, well-healed, and free from pain, then one can enlarge it slowly.<sup>66</sup>
  - 19 Now I shall describe the proper method of repairing a severed nose. First, take from the trees a leaf the same size as the man's nose and hang it on him.
  - 20 Next, having cut a slice of flesh (*vadhra*)<sup>67</sup> with the same measurements off the cheek, the end of the nose is then scarified.<sup>68</sup> Then the diligent

gredients, as seen in the Nepalese version.

- 63 For these aims (i.e., healing and enlarging the ear), the text known to Ḍalhaṇa ([Su 1938: 79](#)) has an additional verse and a half describing an ointment for rubbing the ear (*udvartana*) and sesame oil (*taila*) cooked with various medicines for massage. Cakrapāṇidatta ([Su 1939: 131](#)) does not comment on these verses, nor verse 15 of the Nepalese version, and so the version of the *Suśrutasaṃhitā* known to him may not have included them.
- 64 Ḍalhaṇa's version of 1.16.23 adds another hemistich that states more explicitly that the scarification should not be done on the outside of hole as it will cause derangement.
- 65 After verse 17, the 1938 edition of Ācārya ([Su 1938: 80](#)) has in parentheses nineteen verses on diseases of the ear lobes, treatments and complications. It is possible that these verses were in some of the witnesses used by Ācārya to construct the text as they occur in other manuscripts, such as MS Hyderabad Osmania 137-3 (b). However, Cakrapāṇidatta ([Su 1939: 132](#)) and Ḍalhaṇa ([Su 1938: 80](#)) state that some read about the diseases of the ear lobes in this chapter whereas others read about them in the chapter on various treatments (*miśrakacikitsa*) (SS 5.25), which does indeed begin with a discussion of the disease *paripota*. Ḍalhaṇa goes on to say that some believe that these verses were not composed by sages and, therefore, do not read them.
- 66 The order of verses 17 and 18 are reversed in Ḍalhaṇa's version ([Su 1938: 80](#)).
- 67 The version of 1.16.28b known to Ḍalhaṇa ([Su 1938: 81](#)) reads bound, connected (*bad-dham*) instead of slice of flesh (*vadhra*). This is a critical variant from the surgical point of view. If the slice remains connected, it will have a continuing blood supply. This is one of the effective techniques that so astonished surgeons witnessing a similar operation in Pune in the eighteenth century (see Wujastyk [2003: 67–70](#)).
- 68 Or 1.16.20 could be mean, '... off the cheek, it is fixed to the end of the nose, which

- (*apramatta*) physician, should quickly put it back together so that it is well joined (*sādhubaddha*).
- 21 Having carefully observed that it has been well sown up, two tubes should be fixed in place.<sup>69</sup> Then, having lifted them up,<sup>70</sup> the powder of sappanwood (*pattāṅga*),<sup>71</sup> liquorice (*yaṣṭīmadhuka*, and Indian barberry.<sup>72</sup> should be applied to it.
- 22 The wound should be covered properly with cotton (*picu*) and should be moistened repeatedly with sesame oil. Ghee should be given to the man to drink. His digestion being complete, he should be oiled and purged in accordance with the instructions specific to him.<sup>73</sup>
- 23 And once healed and really come together, what is left of that slice of flesh (*vadhra*) should then be trimmed. If it is reduced (*hīna*), however, one should make an effort to stretch it, and one should make its overgrown flesh smooth.<sup>74</sup>

añjana

has been scarified.’ Unfortunately, the Sanskrit of the Nepalese version is not unambiguous on the important point of whether or not the flap of grafted skin remains connected to its original site on the cheek. However, Ḍalhaṇa (*Su 1938*: 81) clarifies the meaning of the vulgate here by stating that one should supply the word ‘flesh’ when reading ‘connected,’ thus indicating that he understood the flesh to be connected to the face.

- 69 Ḍalhaṇa notes that the two tubes should be made of reed (*nala*) or the stalk of the leaf of castor oil plant (*eraṇḍapatranāla*) (on 1.16.21 (*Su 1938*: 81)). They should not be made of lead or betel nut because the weight will cause them to slip down.
- 70 The Sanskrit term *unnāmayitvā* in 1.16.21 is non-Pāṇinian.
- 71 *Caesalpinia sappan*, L. For *pattāṅga* there are manuscript variants *pattrāṅga* (MS Kathmandu NAK 5-333) and *pattaṅga* (MS Kathmandu NAK 1-1079). Also, MS Kathmandu KL 699 (f. 14r:1) has *pattrāṅga* in a verse in 1.14 (cf. 1.14.36 (*Su 1938*: 66)). The text known to Ḍalhaṇa has *pataṅga* (1.16.29 (*Su 1938*: 81)) and this term is propagated in modern dictionaries.
- 72 *Berberis aristata*, DC. Ḍalhaṇa understands it as elixir salve (*rasāñjana*) (*Su 1938*: 81).
- 73 The expression *svayathopadeśa* is ungrammatical but supported in all available witnesses.
- 74 Ḍalhaṇa accepts a verse following this, which points out that the procedure for joining the nose is similar to that of joining the lips without fusing the ducts (*Su 1938*: 81). He notes that earlier teachers did not think this statement on the nose and lips was made by sages, but includes it because it was accepted by Jejjāṭa, Gayadāsa and others. However, Cakrapāṇidatta does not comment on this additional verse, which suggests that either he did not know of it or was not inclined to accept it (*Su 1939*: 133).



## Abbreviations

- Ah 1902 Kumṭe, Ananta Moreśvara and Navare, Kṛṣṇasāstrī Rāmacandra (1902) (eds.), श्रीमद्वाग्भटविरचितम् अष्टाङ्गहृदयम्, सूत्र-शारीर-निदान-चिकित्सा-कल्प-उत्तरस्थानविभक्तम् श्रीमदरुणदत्तप्रणीतया सर्वाङ्गसुन्दर्याख्यया व्याख्यया समलंकृतम् (Kṛṣṇadāsa Āyurveda Sīrīja, 3; Mum̐bayyām: Nirṇayasāgara Press).
- Anup *Anup Sanskrit Library* (n.d.).
- AS *Asiatic Society* (n.d.).
- As 1980 Āṭhavale, Ananta Dāmodara (1980) (ed.), *Aṣṭāṅgasan̐grahaḥ. Śrīmad Vṛddhavāgbhaṭaviracitaḥ Induṇvākyāśahitaḥ* (Pune: Maheśa Ananta Āṭhavale, Śrīmad Ātreya Prakāśanam), [ark : / 13960/t9773bb9z](https://nopr.scribd.org/ark:/13960/t9773bb9z).
- Bhela 1921 Mookerjee, Ashutosh and Ananta Krishna Shastri, Vedantabisharad (1921) (eds.), *The Bhela Samhita. Sanskrit Text* (Calcutta: University of Calcutta), [ark : / 13960 / t3sv3157j](https://nopr.scribd.org/ark:/13960/t3sv3157j); Based on two copies made of the Thanjavur codex unicus (MS Thanjavur TMSSML 10773, Burnell 1880: 63–4, P. P. S. Sastri 1933: #11085).
- Bhela 2000 Krishnamurthy, K. H. (2000), *Bhela-saṃhitā. Text with English Translation, Commentary and Critical Notes* (Haridas Ayurveda Series, 8; Varanasi: Chaukhambha Visvabharati).
- BL *British Library* (n.d.).
- HIML Meulenbeld, Gerrit Jan (1999–2002), *A History of Indian Medical Literature*, 5 vols. (Groningen: E. Forsten), ISBN: 9069801248.
- KL *Kaiser Library* (n.d.).
- 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](#).
- 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.), सुश्रुतसंहिता, वैद्यवरश्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया समुल्लसिता, महर्षिणा सुश्रुतेन विरचिता, सूत्र-निदान-शारीर-चिकित्सा-कल्पस्थानोत्तरतन्त्रात्मकः. आचार्योपाह्वेन त्रिविक्रमात्मजेन यादवशर्मणा संशोधिता = *The Sushrutasamhitā of Sushruta with the Nibandhasangraha Commentary of Shree Dalhanāchārya* (2nd edn., Mumbayyām: Pāṇḍuraṅga Jāvajī at the Nirṇayasāgaramudrāyantrālaye), [ark : / 13960 / t9j41sg94](#), accessed 09/06/2020; [HIML](#): IB, 312 edition \*v.
- Su 1938 Ācārya, Yādavaśarma Trivikrama and Ācārya, Nārāyaṇa Rāma (1938) (eds.), श्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया निदानस्थानस्य श्रीगयदासाचार्यविरचितया न्यायचन्द्रिकाख्यपञ्जिकाव्याख्यया च समुल्लसिता महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता (3rd edn., Bombay: Nirṇayasāgara Press), [ark : / 13960 / t09x0sk1h](#); [HIML](#): IB, 313, edition cc ('the vulgate').
- Su 1938<sup>2</sup> Ācārya, Yādavaśarma Trivikrama and Ācārya, Nārāyaṇa Rāma (2004) (eds.), महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता, श्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया निदानस्थानस्य श्रीगयदासाचार्यविरचितया न्यायचन्द्रिकाख्यपञ्जिकाव्याख्यया च समुल्लसिता

- (Vārāṇasī: Caukhambhā Kṛṣṇadāsa Akādamī); Reprint of the third, 1938 edition ([Su 1938](#)).
- Su 1939 Ācārya, Yādavaśarma Trivikrama and Śarman, Nandakiśora (1939) (eds.), सुश्रुतसंहितायाः सूत्रस्थानम्. श्रीचक्रपाणिदत्तविरचितया भानुमतीव्याख्याया समेतम् = *Sushrut-saṁhitā (sūtra Sthān) with Bhānumatī Commentary by Chakrapāṇi Datta with Introduction by Gaṇanāth Sen* (Śrīsvāmī Lakṣmīrāma Nidhi Granthamālā = Shrī Swāmī Lakshmī Rām Trust Series, 1; [Jaipur]: Śyāmasundara Śarman), [ark:/13960/t54g0d12m](#); Printed at the Nirṇayasāgara Press, Bombay.
- Su 1945 Ācārya, Yādavaśarma Trivikramācārya and Ācārya, Nārāyaṇa Rāma (1945) (eds.), महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता (मूलमात्रा). पाठान्तर-परिशिष्टादिभिः संवलिता = *the Suśrutasaṁhitā of Suśruta with Various Readings, Notes and Appendix etc.* (Mumbāi: Nirṇayasāgarākhyamudraṇālaye), [URL](#).
- TMSSML *Tanjore Maharaja Serfoji Saraswati Mahal Library* (n.d.).
- Viṣṇudh. Śarman, Madhusūdāna and Śarman, Mādhavaprasāda (1912) (eds.), विष्णुधर्मोत्तरपुराणम् = [*Viṣṇudharmottarapurāṇa*] (Mumbai: Khemarāja Śrīkṛṣṇadāsa at the Śrīveṅkaṭeśvara Steam Press), [ark:/13960/t6qz6fr23](#); Lithograph format. Edited on the basis of a manuscript belonging to the astrologer Śudhākaraśarman of the Varanasi Sanskrit Pāṭhaśālā.

## Index of Manuscripts

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

Bikaner Anup 4390 [11](#)

London BL H. T. Colebrooke 908 [13](#)

Kathmandu KL 699 [18](#), [24](#)

Mumbai AS B.D.109 [10](#)

Kathmandu NAK 1-1079 [18](#), [24](#)

Mumbai AS B.I.3 [10](#)

Kathmandu NAK 5-333 [12f](#), [15](#), [18](#), [24](#)

Thanjavur TMSSML 10773 [25](#)

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## Glossary

*ācārika*  
medical advice 21  
admixture  
*prativāpa* 22  
*āhārya*  
take away 19  
*apāmarga*  
prickly chaff flower  
19  
*apāṅga*  
edge of the hole 23  
*apatānaka*  
convulsions 18  
*apramatta*  
diligent 24  
*ārā*  
awl 18  
*ardhakapāṭasandhika*  
half door-hinge 19  
*āsaṅgima*  
fastening 19  
awl  
*ārā* 18  
  
*baddham*  
bound, connected  
23  
*bandha*  
bindings 21  
*bhedyā*  
splitting 21  
bindings  
*bandha* 21  
blessings pronounced  
*svastivācana* 17  
bound, connected  
*baddham* 23  
  
*cakradhārā*  
rim of a wheel 20  
castor oil tree  
*gandharvahasta* 18  
*chedyā*  
cutting 21

cheek-ear  
*gaṇḍakarṇa* 19  
compressed  
*saṃkṣipta* 20  
compressed  
*saṃkṣipta* 19  
convulsions  
*apatānaka* 18  
cotton  
*picu* 21  
cotton plant  
*kārpāsa* 19  
creeper-ear  
*vallikarṇa* 19  
crow's lip  
*kākausṭha* 19  
cutting  
*chedyā* 21  
  
dais  
*pīṭha* 20  
datura flower  
*dhattūrapuṣpa* 19  
decanted liquor  
*surāmaṇḍa* 21  
*dhānyāmla*  
fermented  
rice-water 21  
*dhattūrapuṣpa*  
datura flower 19  
dilator  
*pravardhanaka* 19  
diligent  
*apramatta* 24  
door-hinge  
*kapāṭasandhika* 19  
dried flesh  
*vallūraka* 19  
duct  
*sirā* 18  
ducts  
*sirā* 20  
*duṣṭa*  
tainted 21

edge of the hole  
*apāṅga* 23  
elixir salve  
*rasāñjana* 24  
*eraṇḍapatranāla*  
stalk of the leaf of  
castor oil plant 24  
  
fastening  
*āsaṅgima* 19  
fermented rice-water  
*dhānyāmla* 21  
  
*gāḍha*  
pinched 22  
*gaṇḍakarṇa*  
cheek-ear 19  
*gandharvahasta*  
castor oil tree 18  
gauze  
*prota* 21  
ghee  
*sarpis* 22  
*granthi*  
lumps 18  
*granthita*  
lumpy 20  
  
half door-hinge  
*ardhakapāṭasandhika*  
19  
*hīna*  
reduced 24  
*hīnakarṇa*  
reduced-ear 19  
  
indian madder  
*mañjiṣṭhā* 18  
inflamed  
*saṃrambha* 22  
  
joins  
*sandhāna* 19  
*sandhi* 20

*kākauṣṭha*  
 crow's lip 19  
*kapālacūrṇa*  
 powdered  
 earthenware  
 crockery 21  
*kapāṭasandhika*  
 door-hinge 19  
*kaṇṇavyadha*  
 piercing the ear 17  
*kārpāsa*  
 cotton plant 19  
*kṛtamaṅgala*  
 received a  
 benediction 17  
*kṣīṇa*  
 wasted 22  
 lead  
*sīsaka* 19  
*lekhyā*  
 scarification 21  
 lotus-splittable  
*utpalabhedyaka* 19  
 lumps  
*granthi* 18  
 lumpy  
*granthita* 20  
*mañjiṣṭhā*  
 indian madder 18  
*manyāstambhā*  
 paralysis of the  
 nape of the neck 18  
*mardita*  
 massaged 23  
 massaged  
*mardita* 23  
 may repair  
*yojayed* 23  
 medical advice  
*ācārīka* 21  
*miśrakacikitsa*  
 various treatments  
 23  
 multi-joins

*vyāyojima* 19  
*nala*  
 reed 24  
 neem tree  
*nimba* 19  
*nemīsandhānaka*  
 rim-join 20  
*nemīsandhānakaḥ*  
 rim-join 19  
*nimba*  
 neem tree 19  
*nirvedhima*  
 ready-split 19  
 obstructed by blood  
*raktabaddha* 22  
 ointment for rubbing  
 the ear  
*udvartana* 23  
 options  
*vikalpa* 20  
*pāka*  
 septic 22  
 paralysis of the nape of  
 the neck  
*manyāstambhā* 18  
*pattāṅga*  
 sappanwood 24  
*picu*  
 cotton 21  
 piercing the ear  
*kaṇṇavyadha* 17  
 piercing  
*vyadhana* 21  
 pinched  
*gāḍha* 22  
*pīṭha*  
 dais 20  
 powdered earthenware  
 crockery  
*kapālacūrṇa* 21  
*prativāpa*  
 admixture 22  
*pratuda*

scavenging 22  
*pravardhanaka*  
 dilator 19  
 prickly chaff flower  
*apāmarga* 19  
*prota*  
 gauze 21  
 puffed up  
*śopha* 22  
*raktabaddha*  
 obstructed by  
 blood 22  
*rasāñjana*  
 elixir salve 24  
 ready-split  
*nirvedhima* 19  
 received a benediction  
*kṛtamaṅgala* 17  
 reduced  
*hīna* 24  
 reduced-ear  
*hīnakarṇa* 19  
 reed  
*nala* 24  
 rim of a wheel  
*cakradhārā* 20  
 rim-join  
*nemīsandhānaka* 20  
 rim-join  
*nemīsandhānakaḥ* 19  
*sādhubaddha*  
 well joined 24  
*saṃkṣipta*  
 compressed 20  
 compressed 19  
*saṃrambha*  
 inflamed 22  
*sandhāna*  
 joins 19  
*sandhi*  
 joins 20  
 sappanwood  
*pattāṅga* 24  
*sarpis*



ghee 22  
 scarification  
   *lekhyā* 21  
 scavenging  
   *pratuda* 22  
 seed-eating  
   *viṣkīra* 22  
 septic  
   *pāka* 22  
 sesame oil  
   *taila* 23  
*sirā*  
   duct 18  
   ducts 20  
*sīsaka*  
   lead 19  
 slice of flesh  
   *vadhra* 23f  
 śopha  
   *puffed up* 22  
 splitting  
   *bhedya* 21  
*srāva*  
   suppurating 20  
   suppuration 22  
*stabdha*  
   stiff 20, 22  
 stalk of the leaf of castor  
   oil plant  
     *eraṇḍapatranāla* 24  
 stick-ear  
   *yaṣṭīkarṇa* 19  
 stiff

*stabdha* 20, 22  
*sunivīṣṭa*  
   very intent 23  
 suppurating  
   *srāva* 20  
 suppuration  
   *srāva* 22  
*surāmaṇḍa*  
   decanted liquor 21  
*svastivācana*  
   blessings  
   pronounced 17  
*śvayathu*  
   swelling 18  
 swelling  
   *śvayathu* 18  
*taila*  
   sesame oil 23  
 tainted  
   *duṣṭa* 21  
 take away  
   *āhārya* 19  
*udvartana*  
   ointment for  
   rubbing the ear 23  
*utpalabhedyaka*  
   lotus-splittable 19  
*vadhra*  
   slice of flesh 23f  
*vallīkarṇa*

creeper-ear 19  
*vallūraka*  
   dried flesh 19  
 various treatments  
   *miśrakacikitsa* 23  
*vartī*  
   wick 18f  
*vāta*  
   wind 19  
 very intent  
   *sunivīṣṭa* 23  
*vikalpa*  
   options 20  
*viṣkīra*  
   seed-eating 22  
*vyadhana*  
   piercing 21  
*vyāyojima*  
   multi-joins 19  
 wasted  
   *kṣīṇa* 22  
 well joined  
   *sādhubaddha* 24  
 wick  
   *vartī* 18f  
 wind  
   *vāta* 19  
*yaṣṭīkarṇa*  
   stick-ear 19  
*yojayed*  
   may repair 23



## Todo list

■ ADD PRIMARY REF)	18
■ añjana	24