

INVITED ARTICLE

The nose between ethics and aesthetics: Sushruta's legacy

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OBJECTIVES: The aim of this article is to determine the origin of interest in rhinoplasty in ancient India, as well as to discuss the ethical and aesthetic implications of the nose in human history.

STUDY DESIGN: Literature review.

MATERIALS AND METHODS: Articles on history of medical ethics and rhinoplastic surgery were reviewed.

RESULTS: Sushruta is considered “the father of plastic surgery,” and ancient India a cradle of rhinoplastic method called “the Indian method.” Origin of interest in and need for rhinoplasty is deeply rooted in ancient Indian society due to the practice of nose mutilations as a form of public punishment for immoral conduct.

CONCLUSION: The nose, once symbol of morality expressed through physical integrity, today becomes an important factor of human beauty. Rhinoplastic surgery is, both then and now, deeply pervaded with both ethics and aesthetics.

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There are very few figures in the history of both medicine/surgery and ethics that have indebted our contemporary knowledge on both subjects as has the figure of Sushruta. Considered the father of plastic surgery, it is on his merit that, even today, the Western world gives credit to India for the method of rhinoplastic surgery called “the Indian method.”^{1,2} This method, of course, later received a few modifications, but the basic principles, as laid down by Sushruta, remain the same.

Sushruta (the name literally means “the one who is well heard,” or “the one who has thoroughly learned by hearing”) lived around 1000-800 BC, in the period after the Dark Age and at the very beginning of the Second Urbanization,² but there is still considerable controversy about his exact age. This period was “the golden age” in the medical history of ancient India, comparable to that of Hippocrates or Galen in the West.²⁻⁴

During that so-called Post-Vedic or Brahmanic period, the main source of Indian medical practices was the teaching of the Ayur-Veda (the Science of Life).^{2,3} Although the Ayur-Veda is not available in its original form (it is disputable whether it has ever been written as such), most of its contents are revealed to us by the writings called Samhitas (Fig 1), authored by two great physicians of that time,

Charaka and Sushruta. Those texts are considered the most authentic representatives and the basic medical treatises of the original Ayur-Veda. Both have similar contents regarding ethics, while the field of surgery is better represented in the Sushruta Samhita.³⁻⁵ The ancient Indian medical practitioners were divided into two classes: the Salya-cikitsakas (surgeons) and the Kaya-cikitsakas (physicians). For both, moral fitness was especially emphasized. Namely, science was studied with a view to benefiting society, and a detailed code of ethical conduct was devised specifically to ensure the ethical practice of medicine and surgery.^{3,4}

In his Samhita, Sushruta made the first attempt to arrange the surgical experiences of the older surgeons and to collect the scattered facts of science from the vast range of Vedic literature.³ He described and classified various surgical operations, grouping them into eight types of procedures. He also gave a list of over one hundred blunt and sharp instruments (Fig 2), adding that a surgeon, by his own experience and intelligence, may invent and add new instruments to facilitate surgical procedures.³⁻⁵ It was through the efforts of Sushruta that surgery achieved a leading position in general medical training and, among the eight divisions of Ayur-Veda, became the first and the most important medical branch.⁴

The area of surgery where Sushruta left by far his greatest mark is plastic surgery, particularly rhinoplastic operations. In his Samhita, Sushruta described different methods used for specific types of defect, such as: 1) release of the skin for covering small defects (sliding graft), 2) rotation of the flaps to make up for the partial loss (rotation graft), and 3) pedicle flaps for covering complete loss of skin from an area (pedicle graft).^{2,4,6,7} Rhinoplasty has been described in great detail, as follows: When a man's nose has been cut off or destroyed, the physician takes a leaf of a creeper, long and broad enough to be of the size of destroyed parts. He places it on the patient's cheek and slices off of his cheek a piece of skin of the same size (in such manner that the skin at one end remains attached to the cheek). After scarifying the stump of the nose with a knife, he wraps the piece of skin from the cheek carefully all around it and sews it at the edges (using the huge heads of ants). Then he inserts two thin pipes in the nose (in the position of nostrils) to facilitate

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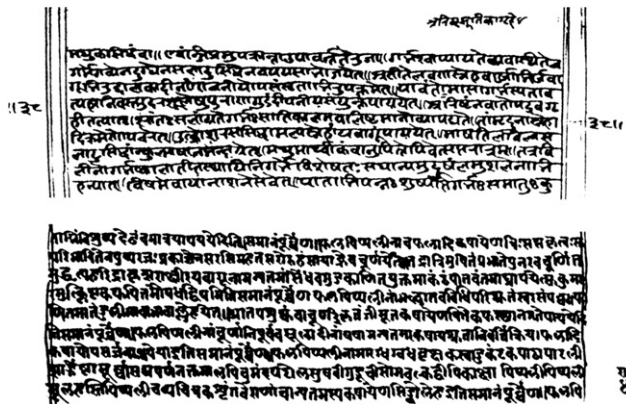


Figure 1 Parts of the text from the Charaka and Sushruta Samhita. Figures reprinted with permission. Source: Book “Science and Secrets of Early Medicine” by Jürgen Thorwald, copyright by Thomas & Hudson Ltd.

respiration and prevent flesh from collapsing. The adhesioned part is then dusted with powders of Pattanga, Yash-timadhukam, and Rasanjana pulverized together. The nose is then enveloped in Karpasa cotton and several times sprin-kled over with the refined oil of pure sesame. When the healing is complete and parts have united, the connection with the cheek is removed.^{6,7} This method of nasal repair using an adjacent flap is known as “the Indian method of rhinoplasty.”¹

The knowledge of rhinoplasty spread from India to Ara-bia and Persia and from there to Egypt (Amintas in Alex-andria, 3rd century AD) and Italy. The first European sur-geon, who restored a lost nose, was Branca de’Branca from Sicily, using Sushruta’s adjacent flap method. His son, An-tonio Branca, used tissue from the upper arm as the repar-ative flap in his operations (around 1460), and “the Italian method” using a distant flap was born.^{1,8} The method was most extensively described by Gaspare Tagliacozzi in his “Chirurgia curtorum” in 1597.^{5,8} Soon after Tagliacozzi’s death, plastic surgery fell into disuse, until the description of rhinoplasty, performed in Poona, India by an Indian physi-cian in March of 1793, published in “The Gentleman’s Magazine and Historical Chronicle of London” in 1794,^{2,6,8} brought the method again to the attention of European surgeons. The method described in the mentioned journal, illustrated with diagrams of the procedure (Fig 3), was similar, but not identical, to the one described in Sushruta Samhita. Namely, in this one the skin flap was taken not from the cheek but from the forehead. But, according to collected data, that surgeon learned this “art” since it was hereditary in the family. Thus, the Poona operation may indeed be an extraordinary survival of a technique from Sushruta’s time.² Taking all this into account, India should indeed be considered “the cradle of rhinoplasty” and Sush-ruta its “father.”

One legitimate question that might occur to us is: Where does that “explosion” of rhinoplastic theory and practice originate from? Obviously, a widespread demand for nose

reconstruction at the time of Sushruta must have existed. And indeed, in ancient India, the nose (sometimes the ear) used to be chopped off as a form of public punishment (mostly for adultery).^{3,4} Since virtually all ancient civiliza-tions precisely distinguished the “public” from the “private” sphere (*polis* vs *oikos* in ancient Greece, or *res publica* vs *res privata* in ancient Rome), with special emphasis on celebrating the public sphere as the sphere of political free-dom for citizens (men),⁹ a public humiliation by violating one’s most innate form of privacy, ie, the physical privacy, is understandable. That ancient way of “making a point” on issues of great importance for the harmonious functioning

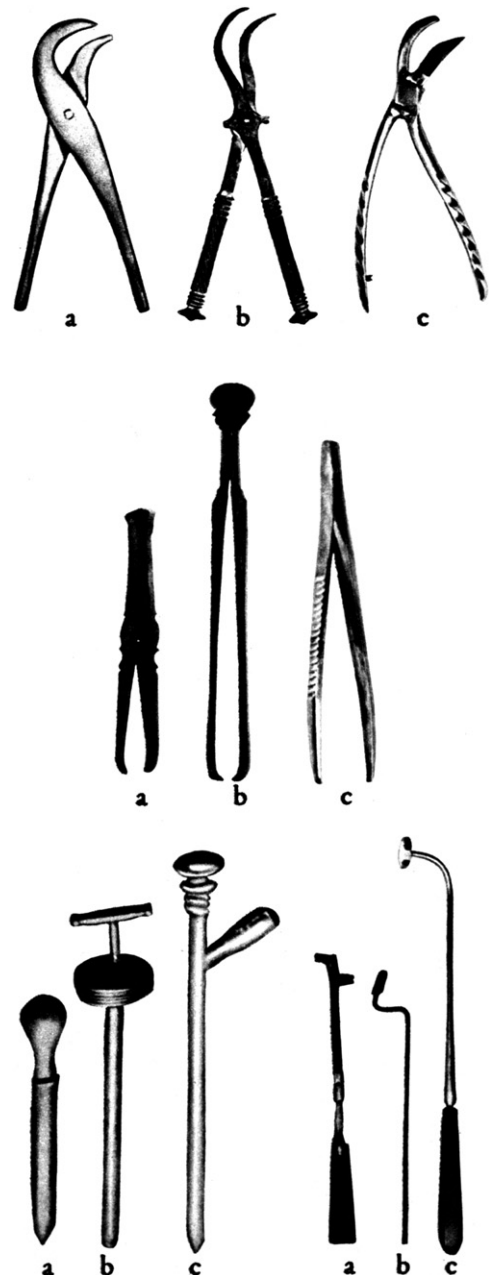


Figure 2 Surgical instruments from ancient India (A), and their influence on the development of surgical instruments of ancient Rome (B), and contemporary times (C).



Figure 3 Rhinoplasty as illustrated in “The Gentleman’s Magazine and Historical Chronicle of London” from 1794.

of the society itself could today be viewed in the frame of bioethical principles of autonomy and above-mentioned privacy.¹⁰

The nose, the most easily (sometimes the only) reachable and most prominent part of the head, as the most important component of the body (both scientifically and mythologically), has often been the aim of mutilation and thus became a symbol of physical integrity. Although not a vital organ, the nose is exposed to everyone’s inspection and therefore is ideal “scenery” of legal action. However, in the same way that it had become the subject of punishment, the nose eventually became the subject of study and medical practice. Its prominent position, on the other hand, attached to the nose also all kinds of metaphoric implications (eg, *to follow one’s nose*; *to poke one’s nose into*; *to turn up one’s nose at somebody*; *to cut off one’s nose to spite one’s face*; *to lead by the nose*; *under one’s nose*; etc.). As usual, ethics transformed into aesthetics, and the nose has become an

important factor in human beauty. It is not too speculative, thus, to claim that the numerous corrective rhinoplastic operations of our times might reflect the old meaning of the nose as a proof of chastity. After all, surgical science—Shalya-tantra (*shalya* = broken parts of an arrow and other sharp weapons; *tantra* = maneuver)—embraces all processes aiming at the removal of factors responsible for producing pain or misery to the body or mind.⁴ Health is, according to Sushruta, a state of physical and mental well-being brought about and preserved by the maintenance of humor, good nutrition, proper elimination of waste products, and a pleasant harmony of the body and the mind.⁴

In conclusion, let us be reminded of the words of Dhana-vantari, who has been worshiped as God of Medicine (as is Asclepius in the Western world), and is considered to be the one who had delivered the Science of Healing to Sushruta and other sages: “The purpose of medical science is release from suffering to those who are in the grip of disease, and maintenance of well being as regards those who are healthy . . . Medical science is eternal, sacred and bestow of heaven, fame, longevity and subsistence.”³

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AUTHOR CONTRIBUTIONS

Iva Sorta-Bilajac, data collection, writer; Amir Muzur, writer.

FINANCIAL DISCLOSURE

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