



SHORT COMMUNICATION

WAS SUSRUTA'S NASA-SANDHANA DEVELOPED INTO RHINOPLASTY?

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ABSTRACT

Sushruta, a great ancient surgeon and philosopher, and above all a great teacher is considered as the father of surgery and the father of plastic surgery even today. He has compiled a monumental treatise on ancient surgery named *Susruta samhita*. *Sushruta Samhita* comprises description of training and practice of surgeons, surgical procedures, drugs of animal, plant and mineral origin. It also includes different surgical procedures including rhinoplasty and various kinds of instruments. Though many consider plastic surgery as a relatively new specialty, the origin of plastic surgery had its roots more than 4000 years old in India, back to the Indus River Civilization. The Gentleman's magazine of London provides us an evidence of an article published in 1794 regarding the procedure of *Nasa-sandhana* of Indian origin and its gradual development into rhinoplasty.

KEYWORDS: *Sushruta*, *Nasa-sandhana*, Rhinoplasty.

INTRODUCTION

The historic contribution of *Sushruta*, the ancient surgeon of India is well recognised for his innovative method of rhinoplasty^[1], extracapsular lens extraction in cataract^[2], anal and dental surgeries^[3]. *Sushruta* was the famous surgeon of Kashi, popularly known as Benaras and used to teach and practice medicine around 600 B.C. A bust of his imaginary picture has been installed in the University Teaching Hospital of Banaras Hindu University, located in the same city to commemorate his contribution to medicine as a whole. He was a disciple of *Dhanwantari*, who is recognised as the Lord deity of Ayurveda (science of life) the Indian system of medicine. The main vehicle of the transmission of knowledge during that period was by oral method. The language used was Sanskrit-the vedic language of that period (2000-500 B.C). The most authentic

compilation of his teachings and work is presently available in a treatise called "*Sushruta Samhita*". This contains 184 chapters and description of 1120 illnesses, 700 medicinal plants, 64 preparations from mineral sources and 57 preparations based on animal sources^[4]. *Sushruta*, one of the earliest surgeons of the recorded history (600 B.C.) is believed to be the first individual to describe plastic surgery. *Sushruta* who lived nearly 150 years before Hippocrates vividly described the basic principles of plastic surgery in his famous ancient treatise '*Sushruta Samhita*' in 600 B.C. *Sushruta Samhita* (*Sushruta's* compendium) which is one of the oldest treatises dealing with surgery in the world indicates that he was probably the first surgeon to perform operations related to plastic surgery. Although many people

consider Plastic Surgery as a relatively new specialty, the origin of the plastic surgery had his roots more than 4000 years old in India, back to the Indus River Civilization. The mythico-religious *Shlokas* (hymns) associated with this civilization were compiled in Sanskrit language between 3000 and 1000 B.C. in the form of Vedas, the oldest sacred books of the Hindu religion. '*Sushruta Samhita*' (*Sushruta's* compendium), which describes the ancient tradition of surgery in Indian medicine is considered as one of the most brilliant gems in Indian medical literature. This treatise contains detailed descriptions of teachings and practice of the great ancient surgeon *Sushruta* which has considerable surgical knowledge of relevance even today^[5].

FATHER OF PLASTIC SURGERY

Sushruta is recognized today as the 'Father of Plastic Surgery' all over the world. The fact that such a man in flesh and blood performed these surgeries a millennium before Hippocrates and two millenniums before European stalwarts like Celsius and Galen ever appeared on the scene is hard for most to realize and appreciate^[6].

Sushruta took surgery in medieval India to admirable heights and that era was later regarded The Golden Age of Surgery in ancient India. Because of his numerous seminal contributions to the science and art of surgery in India, he is regarded as the 'Father of Surgery' and the 'Father of Plastic Surgery'. In "The source Book of Plastic Surgery," Frank McDowell aptly described *Sushruta* as, "Through all of *Sushruta's* flowery language, incantations and irrelevancies, there shines the unmistakable picture of a great surgeon. Undaunted by his failures, unimpressed by his successes, he sought the truth unceasingly and passed it on to those who followed. He attacked disease and deformity definitively, with reasoned and logical methods. When the path did not exist, he made one."^[7]

NASA-SANDHANA (RHINOPLASTY)

Article published in The Gentleman's Magazine gives us the complete description

of how the procedure of *Nasa-sandhana* was developed into the present day's Rhinoplasty. "This untitled article was the first report published in Europe of the Indian forehead-flap method of Rhinoplasty. "B. L.'s" report in The Gentleman's Magazine of the curious operation of making a nose from a forehead flap, accompanied by an engraving of the patient Cowasjee with restored nose and showing the stages of the operation, sparked Western interest in plastic operations. This interest culminated in Carpue's successes with the Indian method in 1814-1816 (Garrison-Morton 5737) which were the turning point in the development of modern plastic surgery. Gnudi & Webster 309-16 & fig. 47 reproducing the famous Cowasjee plate. McDowell 74-88, reproducing plate. Zeis / Patterson 438, also noting a later article on p. 1093 calling attention to European rhinoplasty and Tagliacozzi."^[8]

Same in detail can be found in one of the most eminent book pertaining to Ayurvedic history that gives a detailed description and unfolds the story as, from 1769 AD to 1799 AD, in a period of 30yrs, four Mysore wars were fought between Hyder Ali and his son Tippu Sultan on one side and the British on the other side. As a result of these wars, the British learnt two very important Indian techniques - Rocketry and Plastic Surgery. Both theses Indian techniques were improved and became globally accepted first in England and then in other European countries. How the British learnt the art of Indian Plastic Surgery is a fascinating story. A Maratha cart driver, Kawasaji, who had served the British and four Tilanges (Indian soldiers of the British Army), had been captured by Tippu Sultan of Srirangapatna. After their noses were cut off as a punishment for serving the enemy, they were sent back to the English Command. After some days, when dealing with an Indian Merchant, the English Commanding Officer noticed that he had a peculiar nose and a triangular scar on his forehead. On inquiry, he learnt that the merchant's nose had been cut off as a punishment for adultery and that he had a substitute nose

made by a Maratha *Vaidya* of a Potter caste. The Commanding Officer sent for the *Vaidya* and asked him to reconstruct the noses of Kawasaji and the Four Tilanges. The Operation was performed near Pune in the presence of two English Doctors. An illustrated account of this operation was reproduced in The Gentleman's Magazine of London in OCTOBER 1794. This description fired the imagination of young English Surgeon J.C.Carpue, who, after researching the 'Indian Nose' performed two similar operations in 1814 AD successfully. Concurrent translations of *Sushruta Samhita* by Sanskrits of Germany popularized Plastic Surgery throughout Europe. All replacement operations, which use flaps of skin in the immediate vicinity of the loss, are known as 'Indian Plastic Surgery'.^[9]

CONCLUSION

An article published in Gentleman's Magazine in October 1794 in London provides us evidence that the *Nasa-sandhana* was of Indian origin and how it was developed into presently practiced Rhinoplasty. The article also gives a detailed description of the procedure that was carried out and the subsequent developments happened in the progress of the Plastic Surgery. Therefore *Sushruta* being the "Father of Indian Surgery" is also considered as the "Father of Modern Surgery" and also the "Father of Plastic Surgery".

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