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## ANCIENT INDIAN DOCTRINES OF ETHICS & TEACHING, TRAINING W.S.R. TO SHALYA (SURGERY): A BIRDS EYE VIEW

Rahul Sherkhane<sup>1</sup> and Shivani Ghildiyal<sup>2</sup>

<sup>1</sup>Assistant Professor, Department of Shalya Tantra and <sup>2</sup>Assistant Professor, Department of Dravyaguna, All India Institute of Ayurveda, Saritavihar New Delhi, 110076, Corresponding Author: Shivani Ghildiyal

**Abstract:** In recent years remarkable progress has been done in the field of medical science but meanwhile psychological and philosophical aspect which are under the umbrella of ethics are seems to be neglected. Ethics is a system of moral principles that apply values and judgments to the practice of medical science and it is well recognized that these factors play important role in speedy and successful recovery of the patients. That is why more emphasis is now given on ethical values as this imperative aspect was being neglected in past few decades. But if we look into Ayurvedic classics then we come to know that our ancient sheers and saints has described the importance of ethics in detail. Ethics are important to practice all the branches of medical science but if we think about Shalya (surgery) then the importance of ethics became more essential. Sushruta Samhita the classic of Shalya (Surgery) vividly described it at various places. Sushruta has given code of conduct of teacher as well as of student, duties of surgeon towards his patients, idea of consent before surgery, practical training before surgery over patients etc. In considering its importance and applicability in today's world this paper is written with an aim to throw light over ethics that was practiced in ancient times and the practical importance of these ancient ethics in present scenario.

**Keywords:** Surgery, Ethics, Sushruta Samhita, Shalya

**Introduction:** Ethics is an intrinsic part of medical practice and shapes the contemporary medical profession. It is important for all medical practitioners to be and to act in a right and good way towards patients, relatives, and colleagues <sup>[1]</sup> but surgeons are repeatedly confronted with difficult situations and have to make difficult decisions while performing their duties. Their decisions and code of conduct are expected to be within area of ethics. Presently lot of importance is given that ethics should be followed in medical field however physicians often are in doubt about the best and correct actions to take for the patients in specific situations. <sup>[2]</sup> It is also reported that the respect and trust in the physician-patient relationship have eroded in recent years in spite of the physicians increased therapeutic capabilities <sup>[3]</sup>. There is hardly any aspect in medical science which does not require ethics. The need to reflect on the moral dimension of advances in medical and health care, science, and technology, combined with the desire to enhance public health efforts, has led to the establishment of a number of international

ethical codes and guidelines.<sup>[4]</sup> Ayurvedic classics has given due consideration to ethics in medical profession. Sushruta an accomplished surgeon, philosopher and above all a great teacher has also written lot about ethics.

Sushrutasamhita, the esteemed classic of surgery, provides an elaborate code of conduct, stressing that the medical profession has to be motivated by compassion for living beings. Sushruta described ethics all over in his Samhita and gave elaborated description in two entire chapters devoted to ethics of teaching and training. According to the context several guidelines are given for the students at various places in reference to the subjects dealt in different chapters. Sushruta described doctor's duty towards the patient and states that the patient may doubt his relatives, his sons and even his parents but he has full faith in the physician. Therefore, it is the physician's duty to look after him as his own son'.<sup>[5]</sup> Thus before entering the novel profession of a chikitsaka (doctor) the chikitsaka should know the ethics of his profession. Diverse areas of ethics described in

Sushrutasamhitamay be broadly classified in following heads.

**Pre-requisite Qualities of Scholar:** Sushruta has laid down certain specific qualities which a student was expected to have before he was permitted to this novel science of Chikitsa. Students were expected to fulfill code of conduct during study period and at the onset of training an oath has to be taken by student of chikitsa profession. He has to take oath that he will abandon envy, fury, greediness, ignorance, egotism, self-centeredness, rudeness, miserliness, falsehood, sloth and all other acts that bring a man to disrespect. He was expected to follow personal hygiene, dress code and mental purity during the study period. He was asked to live truthful, disciplined life of a student and obey and respect his teacher. At rest, asleep or awake, at meals, at study and in all his acts, at all times he was guided by instructions of teacher.<sup>[6]</sup>

**Conduct of Teacher:** Sushruta has also described conduct which teacher should follow towards his students. Sushruta says that if the teacher act unjustly towards students even when he obey him totally and faithfully, carry out instructions then may knowledge of teacher may render futile or come to fruition'.<sup>[7]</sup>

**Command on Theoretical Knowledge:** Surgeons were expected to have command over theoretical knowledge before entering in practical field. Practice can be started only after having read and thoroughly studied the science of surgery, having seen and performed the operations himself, having passed the appropriate tests and thence obtained the permission of the governing authority.<sup>[8]</sup>

**Maintenance of Personal Hygiene:** It was mandatory for surgeons to maintain personal hygiene. They have to cut their hairs, nails regularly, have to wear clean clothes and have to maintain physical cleanliness. From descriptions it is clear that importance of cleanliness and disinfection in surgery was known to Sushruta.<sup>[9]</sup>

**Dress Code:** It is mentioned in SushrutaSamhita that surgeons should wear white and sober dress. White colour is considered as symbol of purity that this might be reason for choosing white colour for dress of a surgeon.<sup>[10]</sup>

**Knowledge of Allied Subjects:** Sushruta mentions that a person who studies one branch of science only, cannot arrive at proper conclusion therefore a surgeon should try to learn as many related sciences as possible. He advised methods to improve knowledge and broaden the knowledge. He instructed that surgeon should

study the subject regularly, should take part in scientific debates and discussions, should be in touch with the allied sciences and should take training from specialist of those branches. Sushruta also especially emphasized on importance of knowledge of anatomy and said that one who is well versed in the practice and descriptive anatomy only he should start the procedures Surgeon should clear the doubts by actually seeing surgical anatomy concerned and consulting the appropriate literature.<sup>[11]</sup>

**Practical Training:** Being fundamentally a surgical treatise, the Susruta samhita lays emphasis on practical training. Sushruta insisted that the enormous amount of oral training should be balanced by practical efficiency. The practical training of surgical procedure was mandatory for perfection of speed and skill because it was considered unethical to use human subjects for training purpose of surgery. Before the student was permitted to practice on human being, he was required to attain sufficient amount of skill in various surgical procedures, by a constant practice on ingeniously devised experimental models, elaborately described in the chapter of Yogya. The total surgical methods were divided in to eight main procedures and surgeon may choose operations by combining two or more of these procedures<sup>[12]</sup>. Apart from these eight procedures, some para-surgical procedures too were described. The important one of them are—Kshara karma (chemical cauterization), Agnikarma (Thermal cauterization), Bandhana (Bandaging), Vastikarma (Enema and irrigations) etc. All these parasurgical procedures together with the above mentioned eight surgical procedures have to be practices by students on experimental models suitably designed for them. Following experimental models were used for various surgical as well as para surgical procedures

- Practice of Chedhana (excision) on pushpaphala (a kind of gourd), watermelon, cucumber etc.
- Practice of Bhedana (incision) of cavities on the body of a full water-bag, or in the bladder of a dead animal
- Practice of Lekhana (Scraping) on the piece of skin with hairs
- Practice of Vedhana (Vein-puncture) on the blood vessels of a dead animal or with the help of a lotus stem

- Practice of Visravana (Drainage) on surface of Shalmaliphalak covered with a coat of bee's wax
- Practice of Seevana (Suturing) on pieces of cloth, skin etc.
- Practice of Bandhan (Bandaging) on specific limbs and on full-sized doll of stuffed linen
- Practice of Agni karma on a soft severed muscle or on flesh, or with the stem of a lotus lily etc.<sup>[13]</sup>

Sushruta was the first surgeon to evolve a sound method of training his students in the surgical skill.

**Pre-operative Preparation:** Sushruta emphasized that thorough history taking, physical examination and repeated assessment is necessary for proper diagnosis of disease and its stage.<sup>[14]</sup> He instructed surgeon to examine the site properly to know the nature of foreign body in case of injury. He also advised to assess the life expectancy before starting treatment. Sushruta suggested that required instruments should be collected before operation. He has given check list which surgeon should arrange before starting operation which includes instruments, caustics, agni, probes, horn, leeches, cotton, gauze, bandages, honey, suture material, decoctions of various drugs etc.<sup>[15]</sup> He has instructed to have team of assistants. Sushruta has given emphasis on taking consent from authority prior to operative procedure<sup>[16]</sup>. He says that when death is certain by non-operative treatment and surgery offers the only doubtful hope, it should be carried out after taking consent in order to justify himself. Sushruta advised to preoperative light diet in all operative disease except few diseases.<sup>[17]</sup> Sushruta writes that "wine should be used before operation to produce insensibility to pain." He again says that the patient who has been fed, does not faint, and he who is rendered intoxicated, does not feel the pain of the operation. Sushruta advised to take proper care during handling instruments on patient. He also emphasized on checking sharpness of blade of the knife according to operative procedure to perform.

**Operative Techniques:** As mentioned earlier, Sushruta has described number of operative techniques for various surgical ailments. Beside this, Sushrutasamhita gave detail description about qualities of incision, techniques of incision, type of incision according to anatomical region and according to diseases, counter incision and extension of incision according to

need along with complication of improper incision, suturing etc.<sup>[18]</sup> Sushruta being a surgeon give importance to blood he writes- Blood is the origin of body, body totally depends on it, hence every attempt is made to preserve blood.<sup>[19]</sup> He also described different measures such as drugs, pressure bandage etc to for haemostasis.<sup>+20]</sup>

**Post Operative Care:** Sushruta devoted chapter on proper post operative ward, care of patient and advised various precautions for patient. He described various drugs for fumigation of ward and for wound.<sup>[21]</sup> He remarkably writes that patients should always protected from dangerous and invisible creatures. He also described postoperative dressing and bandages according seasonal variations and according to disease. Sushruta also described emergency surgery. He told that in emergency cases, surgeon should not apply the routine methods of treatments; instead he should act as if his own house on fire.<sup>[22]</sup>

**Discussion:** Ancient Ayurvedic classics are paragon of knowledge if we look in between the lines and can understand the principles and sutras given in Ayurvedic classics then we will find that every aspect of life is touched which are useful for our life and learning. Sushruta the ancient veteran surgeon has mentioned every aspect which are important for surgeons life. The code of conduct of a student and surgeon is mentioned. It is emphasized that before entering into the practical training through theoretical knowledge is essential. The broad thinking of Acharya Sushruta is reflected by the fact that he also gave emphasis for the knowledge of allied sciences to make better understanding of the subject. For practical training appropriate models are described. The importance of taking consent before surgical intervention is well versed. The eight procedures namely (1). Chedana (excision) (2). Bhedana (incision of cavities) (3). Lekhana (Scraping) (4). Vedhana (Vein-puncture) (5). Visravana (Drainage) (6). Eshana (Probing) (7). Aharana (Extraction) (8). Sivana (Suturing). mentioned by Acharya Sushruta are the basis for any kind of surgery, almost all surgical operations are carried out by the permutations and combinations of these primary procedures. Important Para surgical procedures i.e. Kshara karma (chemical cauterization), Agnikarma (Thermal cauterization), Bandhana (Bandaging), Vastikarma (Enema and irrigations) are ascribed in detail. This classified approach has a great benefit so far as the teaching of surgical art is concerned. It enables student to

pick up one procedure at a time and master it by repeated practice on models, thus obtaining proficiency in all the eight procedures within shortest possible time.

**Conclusion:** Sushruta's contributions to ethics and surgical training are remarkable – and, almost 3000 years later, continue to have great relevance today, given current widespread concerns about the erosion of long-held value systems and cherished codes of medical practice. If one follow it than it will certainly lead to better patient-doctor relationship.

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