

International Journal of Research in Indian Medicine

Elaboration of *Mritsanrakshan Paddhati* According to *Sushruta Samhita*

A. P. Thakare,

Professor, Dept of Rachana Sharir,
Ramrao Patil Ayurved Mahavidyalaya & Rugnalaya,
Purna, Dist. Parbhani, Maharashtra

*Author Correspondence: archpatil2710@gmail.com

ABSTRACT:

Anatomy is the basic knowledge of medicine. Hence, cadaveric study is not only dissection but also helps to identify the structures, its courses, relations and variations.

This can only be possible if cadavers were embalmed properly. In *Ayurveda*, a special method for dead body preservation is given by *Acharya Sushruta*¹. This method is called “*Mritsanrakshan*”¹.

KEYWORDS: Dissection, Human cadaver, *Jalnimajjan Paddhati*, *Mritsanrakshan*.

INTRODUCTION:

As per *Parishabdhartha Shareera*, *Mruta Samshodhana Vidhi* is a terminology, which denotes dead body preservation and dissection procedure². The meaning of these

terminology is stepwise described in detail, by using different commentaries. There are many different methods of dead body preservation.

Acharya Sushruta given in detail description of dead body preservation with dissection procedure². Dissection is the base of practical knowledge of human anatomy for medical students and for that purpose, there is a need of preservation of dead body⁶. Hence terminology of dead body preservation and dissection procedure is known as *Mruta Samshodhana Vidhi* according to *Paarishaadyam Shabdhartha Shareeram*⁷.

Cadaveric study plays important key role to obtain practical knowledge along with theoretical knowledge to understand subject clearly for surgeon for surgery and physician for perfect

decision in making Prognosis, Diagnosis and Treatment⁷. Hence *Acharya Sushruta*, the first Ancient Indian Surgeon and Master in the Anatomy, was the only *Acharya* who mentioned about selection criteria of dead body, it's preservation and carried out dissection for the first time in the field of medical profession².

Cadaver remains a principal teaching tool for anatomist and medical educators teaching gross anatomy. Cadaveric dissection is a good tool in learning the concepts of gross Anatomy. It helps doctors to evaluate their interest and trends towards surgical fields and also build-up concepts which were utilised in their professional life.

For better practical knowledge it is essential to have better knowledge of subject. For this purpose, the process of *Mritsamshodhan Paddhati* or embalming had introduced in our ancient literature¹.

Need for preservation: Embalming, the word is derived from latin word with "em-encapsulated and balming or balsam", any aromatic resin produced by certain trees of the mint family⁸.

It is the science of temporarily preserving human remains to forestall decomposition and make it suitable for display.

MRITSAMSHODHAN PADHATTI:

In *Ayurveda*, the process of embalming has described by *Acharya Sushruta*. He had explained that description of anatomy of human body up to skin is the subject matter of surgery. Therefore, one who intends to acquire definite knowledge of surgery should study the anatomy practically by dissecting the dead body properly. For that purpose, he had explained the following guidelines for embalming and dissection.

Acharya Sushruta used many references in his text for preservation.

According to *SushrutAcharya* - Cadaver should be

1. *Samastagatram*: - The body you need to preserve should not have any congenital malformation; it should be normal. To acquire normal anatomical knowledge, the dead body should be with its whole appropriate shape and sized *Angapratyangas* (parts/component). Means all body parts should be in their natural

numbers. There should be no deficit or extra or defective part or congenital malformation. Lack or deficit or extra parts body, will not give exact anatomical structural knowledge perception⁸.

2. *Avishopahatam*: - The entire body of person not died of poisoning or chronic disease. The person whose body going to use for dissection should not be died by poison because it will damage integument & may also affect dissector. Different types of poisons affect different body parts/organs. The affected part does not remain natural and wrong knowledge of structure will be gained when we dissect such type of body. So, poisoning should not be the reason of death. Hence cadaver, which was not dead due to poisoned condition, should be selected for preservation and dissection. *Acharya Dalhana* states that, due to poison death is certain, and whatever poison gets in contact in body it will destroy skin to internal structure as like volcano³.
3. *Adeerghavyadhipeeditam*: According to *Sushruta* cadaver should be free from chronic diseases¹.

4. *Avarshashatikam*: *Sushruta* refuses to take old person's body as well as children's body.

5. *Nisrushtaantrapureesham* :- According to *Sushruta* Fecal matter from intestines is removed to avoid decomposition by bacteria⁴. The intestine is a main source of many bacteria, as it helps for digestion in living person. After death these bacteria starts autolytic fermentation and travel/move/spread towards stomach, and external environment by guda, and all over body by other pathway and starts decomposition internally all over body and other bacteria which are expose to environment after coming out from intestine, starts to decompose body via skin to other parts of body with help of other external aerobe or anaerobe micro-organisms and gradually decomposition begins with forming body soft, many gases form due to fermentation process in body and swelling with bad odour also starts randomly with decomposition . So, to prevent above mechanism and avoid decomposition and contamination of cadaver, *Acharya* mentioned this term.

6. *Avagahntyamaapgayam*: - According to *Sushruta* cadaver should be well tied and kept in river which has slow running stream so that skin get easily separate. *Sushrutacharya* has mentioned that dead body should be kept in flowing water³. There is a scientific reason behind this as decomposition is slower in flowing water than in stagnant as flowing water constantly washes out the organisms from the surface of body, hence avoiding manifestation of autolytic fermentation from external microbes, because by immersing cadaver in slow flowing water leads to low and uniform temperature of cadaver, hence creates barrier from getting in contact with air and external microbes and makes body soft, moist, prevent bad odour in cadaver to carry out dissection easily without difficulty further.
7. *Nibadhham*:- Cadaver should be tied.
8. *Panjarastham*:- Should be kept in a cage placed in a flowing river. The body should be kept in a cage i.e., made up of using bamboo or iron cage as per size required of cadaver, to protect cadaver from aquatic animals like fishes, alligators, crabs and

other carnivorous animals etc, because *Acharya Dalhana* said that in case if cage is not used, then these aquatic animals or other wild animals may harm cadaver or damage physical entity or eat it, so cage was used in that era for protection.

9. *Munjavalkalkushshanadinam Anyatamen Aaveshtita Angpratyangam*:- Should be wrapped with one of *Munja, Valkal, Kusha, Sana* etc⁵.
10. *Aprakashdeshe Kothayet*:- According to *Sushruta* cadaver should be kept hidden dark place and should be made to decompose in a dark area².
11. *Samyak Prakuthitam Udhrutya Tato Deham Saptaratrat*: After seven days cadaver should be taken out and wrap should be removed.
12. *Ushir Bal Venu Valkala Kurchaanaam Anyatamen Shanai Shanai Avgharshyanstvagadin Sarvaneva Bahyaabhyantarangpratyang Visheshan Yathokran Lakshayechchkshusha*:- There after a week, when the body is fully decomposed it is taken out and slowly rubbed with brush of one of ushira, hair, bamboo and balvaja while observing all parts,

external and internal⁴. These are the drugs explained by our *Acharyas* for wrapped/binding the cadaver, by using one of the plants like *Munja*, *Valkal*, *Kush*, *Shana* etc or others with similar properties. There are 3 purposes behind this.

i. To protect body from small aquatic animals like fishes, other aquatic animals and carnivorous animals. As these animals may cause injury or eat off cadaver.

ii. To make the skin of dead body soft, organs and muscles attached to bones become smooth and soft by oxidation process, so as its dissection will be easily carried out by using dissection instruments.

iii. Also there may be some other reasons for mentioning these specific plants, they may contain preservative constituents which help for preservation.

1. *MUNJA* – *Saccharum munja* Roxb – Graminae (*Shar, Tirkande*) It is a source of natural fibre. So, it has been used to wrap the dead body.

2. *VALKALA* – 5 astringent plants are to be considered

under the term *Valkala*. They are,

- i. *Nyagrodha* (Ficus bengalensis Linn. - Moraceae),
- ii. *Udumbara* (Ficus glomerata Roxb.- Moraceae),
- iii. *Ashvatha* (Ficus religiosa Linn. - Moraceae),
- iv. *Pareesha* (Thespesia populnea Soland.- Malvaceae) and
- v. *Plaksha* (Ficus lacor Buch.Ham.- Moraceae) .

All these 5 plants contain tannins.

- *Panchavalkala* are *Shothahara* (reduces swelling) and
- *Vranaropaka* (helps in wound healing). It shows properties like antiseptic, anti-inflammatory, antioxidant, antibacterial, antimicrobial wound purifying and healing, and astringent. As these properties helps in dead body preservation, *Acharyas* have mentioned *Valkala* to wrap the dead body while preserving.

3. *KUSHA* – *Desmostachya bipinnata* Stapf Graminae [*Suchyagra, Yagyabhushan*]

- *Kusha* possesses antibacterial effect against gram negative and gram-positive

pathogens. This property of *Kusha* helps in protecting the dead body from putrefaction by bacteria.

- Phytochemical analysis showed that tannins present in *Kusha*.

4. *SHANA* – *Crotalaria juncea* Linn.- Leguminoaceae (*Taag In Marathi*)

- It is a source of natural fibre.
- In the folk and Ayurvedic medicines, it is used as astringent. (Tends to shrink body tissue). This astringent property helps in shrinking swollen tissues of dead body⁸.
- Plants of genus *crotalaria* have been found to possess significant antimicrobial activity.



Brushes should be made of *Usher*, *Baal*, *Venu* using any one among mentioned drug or any other similar material should be used in the form of

*Kurcha*⁴ i.e., bunch of grass in brush structure, for dissection purpose. Using above drugs in the form of *Kurcha* helps easy for dissection by Scrubbing the cadaver, from external to internal, and one can visualize superficial fascia till deep structures using this method.

DISCUSSION:

During ancient periods *Mrutasamshodhan* was done by wrapping cadaver with some drugs then kept in a cage and placed in flowing water. It was done only for study purposes. By performing dissection our *Acharya Sushruta* was able to explain briefly about constituents of anatomy perfectly, hence comparative to all *Samhita*, *Shareera*, *Sthana* is best work considered in *Sushruta Samhita*¹. That's why he is considered master in surgery.

To obtain *Nis-Samshaya Dnyana* for surgeon, he should study anatomical structures/parts using *Mrutasamshodhana Vidhi*. By which he able to locate exact location, identification relation of body parts/organs or else surgeon may not locate properly structure and may

take incision in wrong location etc.

By dissection we can able to visualize macroscopic constituents i.e., skin, tissues, organs, skeleton, blood vessels, nerves etc of human body, these are analysed by using *Pratyaksha pramana*⁴.

To have exact normal practical knowledge of body parts, right from skin to internal structure and its location, number, size, shape etc, is best understood via dissection, we get only practical abnormal aspect of *Shareera* in *Shalya Tantra*, hence for being successful surgeon one should perform and get practical knowledge by *Pratyaksha Pramana* to have undoubtful *Nis-Samshaya Jnana* for normal human anatomical structure.

CONCLUSION:

“*MRUTA SAMSHODANA VIDHI*” is termed as “dead body preservation and dissection procedure” by *Paarishaadyam Shabdārtha Shareeram*, which denotes revalidation of *Shastra* related to *Rachana Shareera* by practical demonstration through dissection¹.

While observing history of *Mruta Samshodana Vidhi* practices varied, according to different periods, eras and regions. Dead body preservation method of *Acharya Sushruta* comes under natural method of preservation In *Ayurveda* according to *Acharya Sushruta* the proper study of cadaveric dissection will definitely help in surgery.

This *Mritsanrakshan Paddhati* or procedure of cadaveric preservation mention by *Sushruta* is helpful for anatomist.

Therefore, we can say that *Mritasanshodhan Paddhati* [preservation method of dead body(cadaver)] according to *Acharya Sushruta* has a scientific study which is the unique contribution from *Susruta Samhita*⁵.

REFERENCES:

1. Dr. Bhaskar Govind Ghanekar; *Sushruta Samhita Sharirsthana* 5/60. New Delhi: Meharchand Lachmandas Publications; page no.-177: Reprint 1988
2. Dr. Bhaskar Govind Ghanekar; *Sushruta Samhita Sharirsthana* 5/58. New

- Delhi: Meharchand Lachmandas Publications; page no.-177: Reprint 1988
3. Dr. Bhaskar Govind Ghanekar; *Sushruta Samhita Sharirsthana* 5/59. New Delhi: Meharchand Lachmandas Publications; page no.-177-178: Reprint 1988
 4. Dr. Bhaskar Govind Ghanekar; *Sushruta Samhita Sharirsthana* 5/61. New Delhi: Meharchand Navneet Kaur et al. UJAHM 2016, 04 (03): Page 12-15 Unique Journal of Ayurvedic and Herbal Medicines, 04 (03), May-June 2016 15 Lachmandas Publications; page no.-178: Reprint 1988
 5. [1] Priyavrat Sharma, editor. *Susruta Samhita* (With English translation) vol.II. Varanasi: Chaukhambha Vishvabharati; 2005. p.182)
 6. Dr. Ghanekar, commentator, *Sushruta Samhita Sharirsthan*. New Delhi: Meherchand Lachmandas publications; 2013. p.178
 7. Vd. Shivaji Vavhal, Sharir Rachana Vidyan Part.1, Shantanu Prakashan, 10 th edition,p.7
 8. Chaudhary B., Tripathi M. K., Bhandari H. R., Pandey S.K., Meena D. R. and Prajapati S. P. -Evaluation of Sunnhemp (crot.jun.) genotypes for high fibre yield, The Indian Journal of Agricultural Sciences, 2015,ISSN:0019-5022,85(6)

Conflict of Interest: Non

Source of funding: Nil

Cite this article:

"Elaboration of Mritsanrakshan Paddhati According to Sushruta Samhita."

A. P. Thakare,

Ayurline: International Journal of Research In Indian Medicine 2022; 6(2):01-08