A comprehensive study on *Mrita Sharir Samshodhana* in Ancient Ayurveda and Modern Science

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**Abstract**

According to Ayurveda, Maharshi *Sushruta* invented surgery. First Indian surgeon was Maharshi *Sushruta*. According to *Sushruta*, learning how to dissect a dead body is fundamental to become a good doctor and surgeon. *Sushruta Samhita*, provides a brief explanation of dissection and preservation. For preservation, understanding of acceptable preservation techniques is necessary. A dead body is more likely to be destroyed when the incorrect preservation method is used to preserve it. *Acharya Charaka* says that understanding *Shukshama* and *Sthula Sharir* in its whole is necessary for understanding the *Sharir Rachana*. It is being done to compile all available data on Ayurvedic science, including how the body is collected, where it will be kept, and how it will be conserved. The modern preservation technique differs from the Ayurveda approach.

**Key words:** *Mrita Samshodhana, Preservation, Dissection, Ayurveda*

**Introduction**

The two greatest *Samhita* in Ayurveda are *Charaka Samhita* and *Sushruta Samhita*. In Ayurveda, Maharshi *Sushruta* was India's first physician. Maharshi *Sushruta* is well knowledgeable about *Sharir Rachna*, such as by a number of pieces of evidence. Maharshi *Sushruta* goes into considerable depth about the *Ayurvedic* preservation and dissection method. The *Sushruta Samhita* addressed surgical issues like the use of various tools and surgical techniques since he felt that students going to be surgeons should have a full understanding of the human body's structure, there is solid evidence that knowledge of human anatomy was obtained through both surface inspection and dissection. When you consider the limitations that made it impossible for people in ancient India to gain knowledge of anatomy the improvement of surgery is incredible.[¹] The dissector did not actually need to touch the warps for Maharshi *Sushruta* to pass through the message and illustrate his incredible understanding of human anatomy by removing skin and flesh with a brush-like broom.[²]

**Aim**

To study methods of dead body preservation and dissection in ancient and modern literature.

**Objectives**

1. To study details of *Mrita Samshodhana* method.
2. To study comprehensive on *Mrita Samshodhana* methods from *Ayurvedic* and modern text books.

**Materials and Methods**

1. All the literatures were collected from Ayurveda and modern texts.
2. Related websites.
**Review of Ayurvedic Literature**

In the Pre-Vedic period, the preservation of the dead body can be found in Ramayan. After the death of Dasharatha Maharaja the body was kept in Tail Droni.\[3\]

In the Buddhist period, during this time, sharp objects were not permitted due to Buddhist Ahimsa Siddhanta, small changed at the time. The Pyramids of Egypt are the preservative technique of death body over many years. In this, the dead bodies of king were kept safe.\[4\]

Surgery require more knowledge of the whole body and body structure. This knowledge is obtained through cadaveric dissection. Maharshi Sushruta has described the entire body structure and method of dissection in Sharir Sthana.\[5\] The procedure of Mrita Sharir Samshodhana Vidhi or Embalming has been introduced in our ancient and modern literatures for this purpose.

**Mrita Samshodhana Vidhi (Method of Cadaver Preservation and Dissection)\[6\]**

The method of Mrita Samshodhana has described by Maharshi Sushruta in Ayurveda, he had explained the following steps

1. **Identification criteria**
   - Samastha Gatram - all body internal and external body structure are present.
   - Avishoupahitam - Poisoning should never be the causes of death.
   - Adhirga Vyadhi Piditam - Not suffering from a chronic illness.
   - Avarsa Shatikam - Must not be more than 100 years of age or must be employed.

2. **Cleaning the body**
   - Nisrushtaanta Purusheha - Expelling faeces from a dead body.

3. **Preservation and Dissection**
   - According to Maharshi Sushruta after the dead body has been selected and cleaned.

It is covered in either Munja grass, Valkala (tree bark), Kusha grass, Shana (cannabis plants) etc. and finally tied tightly together and placed inside a frame that should be generated to decompose in a dark place and inside a slow flowing river for about seven days. The dead body has become properly decompose; it should be wrapping and taken out removed. Slowly rubbing the dead body with Brush. Brush is made from Usheer (Grass), Baala (hairs), Venu (bamboo), Valkala (inner bark of trees), Kusha (Trina Panchmoola), or similar material and external (Bahya) and Internal (Abhyantar) part of body such as the skin, Muscles etc. should be completely observed with the eyes (Pratyaksha).\[7\] According to Maharshi Sushruta, it is not possible to see with eye the very minute soul in the body. He can be seen with Gyan Chakshu (Knowledge).\[8\]

**Modern Method of Cadaver Preservation**\[10\]

It is a temporary method of preservation of cadaver by preventing decomposition and restore a natural appearance for viewing a body after death.

**Purpose**

1. Preservation of cadaver.
2. Inhibition of growth of fungi, bacteria, maggots etc.
3. It gives the cadaver an ante mortem appearance which not only generates interest for dissection but also helps to identify the structures, its course, relation and variations which are encountered during the dissection.

**Embalming chemicals**

Embalming fluid contains a mixture of formaldehyde, methanol and other solvents. i. Formaldehyde - 5 to 29% ii. Methanol - 9 to 56%, Formalin - 4 litres, Water -
4 litres, Methyl alcohol - 1 litre, Glycerine - 500 ml, Cetrimide - 500 ml, Eosin - 25 ml, Eucalyptus oil - 25 ml.

**Method of injection**

Arterial embalming by gravitation method is simplest, safest method. In this method gravity bottle is placed at 3 to 4 feet above the height of embalming table which provides a pressure of 0.6 kg/sq.m.

**DISCUSSION**

In Ayurveda various part of body has been described in Rachana Sharira. In modern time various body parts and structure of body are studies under the subject of anatomy. The word *Mrita Samshodhana* has been used for dead body preservation and dissection in Ayurveda and the word embalming is used in modern science. Dead body selection criteria in Ayurveda state that *Samasth Gatram* means all organs and structures of body should be present so that complete knowledge can be obtained during dissection. Organ and structures of body are damaged due to poison; therefore a dead body not be taken with poison. Body are shrinks with increasing age, hence it should be taken for bodies less than 100 years. Dead bodies were kept in dark place because in ancient times, dead body preservation was not considered a good practice. In *Mrita Samshodhana* method described by Maharshi Sushruta, the dead body is preserved in a natural way with *Munja, Valkal, Brusha*, etc. because they are act as anti-infective. In modern science, dead body is preserved by using chemical components such as formaldehyde etc. *Baala* (hair), *Kurch* etc. are used for dissection of cadaver and blade, scalpel, many instrument are used for dissection in modern methods. According to Maharshi Sushruta, after seven days of preservation with the support of *Kusha, Khasha*, and bark, dissection of the dead body is possible but according to modern, chemical components are inject in dead body. By keeping the dead body in flowing water for 7 days, it becomes properly swelling so that a good knowledge of the structure can be obtained at the times of dissection.

To perform a good surgery, it is necessary to know about the whole body parts so that important organ, structure etc can be saved during surgery. Hence it is necessary to practice it in the cadaver before performing the surgery.

**CONCLUSION**

The many preservation techniques are discussed in both Ayurveda and contemporary science. Ayurveda uses an easy, all-natural preservation technique. In contrast to current preservation methods, which involve various chemical agents, Ayurveda methods do not use any chemicals at all. The effects of these chemicals on dead bodies might be risky and may damage the deceased body. In light of this assessment, we may conclude that the Ayurvedic technique of preservation is secure and natural, and that it can be used to preserve a body.

**REFERENCES**


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