

BODY DONATION: A VALUABLE ACT - REVIEW STUDY.**Vd. Sayli Shivaji Jadhav**Email id: jadhavsayli1995@gmail.com

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ABSTRACT

The subject of Rachana Sharira deals with the structures of the body and how they function. 'Rachana' means structure itself. Anatomy is one of the most important subjects in modern clinical science for education and knowledge of whole body grossly through dissection. During dissection, tissues are cut apart or separated to study their structures. Cadaveric dissection is an integral part of anatomy study. We need an unclaimed body or cadaver for study or dissection. Ayurvedic methods were used by Acharya Sushruta to dissect human bodies in ancient India. Andreas Vesalius was the first medical student to dissect a human corpse. According to Anatomy Act 1948, dead bodies can be collected for teaching purposes. The act of donating one's whole body for medical research and education after death is defined as an informed and voluntary decision. The most common source of cadavers worldwide is body donation. Donating a body to science is usually free. Worldwide, there is a scarcity of cadavers. In this article, we review the history of body donation. The article explains who can donate and who can accept bodies in India, as well as the procedure. Different religions approach body donation differently. India and the world need to overcome body scarcity.

KEYWORDS: Rachana Sharira, Anatomy, Dissection, Cadaver, Body donation, Medical research, Shadanga Sharira.

INTRODUCTION

One of the most reliable medical sciences is Ayurveda. Other sciences may change their principles from time to time, but Ayurveda's has not. Additionally, Acharya Sushruta was specially privileged because of his outstanding Sharira studies. Sharira Rachana (Human anatomy) is the subject of Ayurveda in Bruhatrayee. According to Acharya Sushruta, the purpose of describing Sharira Sthana is to gain a comprehensive understanding of Sharira and their approach to it is very unique. There are various parts to Sharira Sthana, starting with embryo development for human anatomy. Medical science begins with knowledge of the human body. The first recorded human dissection took place around 200 BC by Acharya Sushruta, and cadavers have been used in learning since the 16th or 17th century, by observing and studying, one should remove his doubts¹. The

description and classification of different body structures are countless contributions he has made to Ayurvedic Sharira. To become an expert in Ayurveda, the Vaidya must teach the Sharira thoroughly so all his doubts are cleared, and then he should use this knowledge to treat his patients.

Ayurveda does not provide a detailed description of Rachana of Sharira up to the skin, so we should learn about Rachana of Sharira subtly for a thorough understanding of surgery². In order to acquire knowledge, we need a Sharira, Deha, or body. Immediately following the donation process, the preservation process begins. On that time, Acharya Sushrut's approach was very unique and useful for body preservation. In recent years, certain exclusive preservation methods have been discovered, but even today, his approach remains unique. Back then, it was called Mritasanrakshan Vidhi. Then the student dissects it. The process of cutting artistically, where all gross or microscopic structures can be viewed and defined according to various anatomical literatures.

HISTORICAL REVIEW

According to Indian mythology, *Rishi Dadhichi* was the first person to donate their body. It is described that he donated his living body (during his lifetime) to *Devraj Indra* for the purpose of preparing auspicious weapons out of his bones. *Daitya Vritasura* was defeated by these pious weapons. A story from the *Puranas* about the troublesome demon *Vritrasura*, which the Gods and mankind wanted to get rid of, can be traced to the history of body donation. About 500 BC, *Sushruta* dissected a human body in ancient India³. In Europe, barber-surgeons used to demonstrate various body structures to professors at their command in the 15th century for the purpose of learning about human anatomy. As an undergraduate and as a professor, *Andreas Vesalius* (1514-1564) dissected the cadaver for the first time⁴. A law was enacted in 1948 requiring hospitals, medical schools, and educational institutions to collect unclaimed bodies for anatomical examinations and dissections. All of its states have adopted it uniformly⁵. Maharashtra (old Bombay State) adopted the Anatomy Act as the Bombay Anatomy Act 1949.

AIMS AND OBJECTIVES

1. To study the procedure of body donation.
2. To study the process of embalming through *Ayurveda* and modern medical science.
3. To study the importance of body donation.

MATERIAL AND METHODS

MATERIAL

Ayurvedic Samhita and their commentaries, modern books, published research papers, articles, medical journals and internet.

Process of body donation

With its unique origins, body donation is also known as *Dehadana*. *Acharya Sushrut's* method of body preservation is highly special and helpful at that time. Even if several special preservation techniques have been found recently, his method is still highly distinctive. It was referred to as *Mritasanrakshana Vidhi* at the time. Students dissect it when it has been completed. The creative cutting method that allows all structure, whether large or small, to be seen and defined as it is described in various anatomical literatures.

METHODOLOGY

Type of study – Review study Literature related to the title is explored from all reliable *Ayurvedic* journals and internet. Conclusion has been drawn from systemic analysis, comparison and rationale.

BODY DONATION

Donating a body for medical research and education is known as body donation. Donating a body can help us better understand the human body and advance science. There are several factors that might make a body unsuitable for an anatomical donation, and some of these may not be apparent until after death.

WHO CAN DONATE THE BODY?

A person can donate his body regardless of their age, gender, caste, religion, or socioeconomic status. It is possible to register as an organ, eye, and tissue donor if you are 18 years old or older. The gift (donation) could be made by the deceased's relatives after their death if their relatives knew they had intended to leave their body as a bequest, but never filed the paperwork during their lifetime. Anyone who, prior to dying, expressed a desire to donate the body for medical education or research, either in writing or orally, in the presence of two or more witnesses (may be a close relative or next of kin). Donations can be made by anyone regardless of age or religion, and most major religions support them. Medical institutions or universities approved by state governments for medical research and education may accept the body.

WHO CAN ACCEPT THE BODY?

Medical schools, hospitals, and teaching institutions which are approved by the state government can accept the body for medical research, education, or treatment.

PROCEDURE TO DONATE THE BODY

1. Complete the willingness form available at the approved institution. It is possible to donate a body without filling out a form.
2. Communicate your wishes to your next of kin or close relative.

3. Within three to five hours of the donor's death, the next kin or near relative should transport the body to the approved medical institution.
4. Donating a body requires the following documents:
 - a. Certified death certificate from a medical professional or hospital.
 - b. Permit issued by local governing authority, e.g. Municipal corporation.
 - c. Application by a close relative or next of kin.

SUITABILITY OF A BODY FOR DONATION

Some of the donated bodies may not be suitable for use, as they are going to be used to study the normal structure of the human body. The following are some of the most common reasons for rejection of a body:

1. In the case of a medicolegal case (such as suicide, homicide, accidental death, etc.).
2. Bodies that have been post-mortem.
3. An individual with a contagious or communicable disease, such as HIV, AIDS, Tuberculosis, Hepatitis B & C, Gangrene etc.
4. A body that has decomposed.
5. Body that is extremely obese or emaciated.
6. An organ-free body (except for the eyes).
7. An individual suffering from psoriasis, bedsores, or other skin diseases.

For any other reason, the medical institute may reject the body. When the body is donated, the medical institution decides whether to accept or reject it. While the prospective donor fills out a willingness form, the recipient (the medical institution) is not required to execute the donation.

Criteria for Rejection of a Body

Whole body donation is open to all individuals, regardless of their gender, caste, or age. Nevertheless, some donated bodies are not accepted if, for example, an autopsy was performed, an organ or limb was amputated, the deceased had certain contagious, infectious or communicable diseases. Homicide, suicide, or decomposed bodies are all examples of medico-legal bodies.

CURRENT SCENARIO

In spite of the importance of whole-body donation for medical education, the number of

individuals choosing to donate their bodies remains low. Worldwide, there is a scarcity of bodies^{5, 6, 7}. It is the same situation in India as well. 90.90% of medical colleges in Maharashtra (India) lacked cadavers in a previous survey conducted⁸.

Colleges run by private management, as well as those run by state and federal governments, fall within this category. As a result, these institutes have to rely on unclaimed bodies, which have also proven difficult to obtain.

FACTORS AFFECTING BODY DONATION

The factors affecting the willingness to donate the body have been studied by few researchers. The factors are race, ethnicity, demographics, and awareness about organ donation, age, sex, education, occupation, income, and attitude toward religion, spirituality, marital status, and number of dependents^{7, 9, 10}. The willingness to donate a body is associated with one's age. According to various researchers, young people are more likely to donate their bodies than older people^{8, 9, 11, 12}. Additionally, the gender-males are more inclined to donate their bodies than females^{7, 8, 12, 13}. There is a higher tendency for the educated class to donate their bodies than the less educated class. People with lower education are less likely to donate cadaveric organs, according to studies^{11, 12}. Religion does have a significant impact on body donation.

RELIGION AND BODY DONATION

The act of giving is supported and encouraged by almost all religions around the world. Hinduism believes in the theory of incarnation. Although the body is mortal, the soul is immortal. During each birth, the body changes. As a result, it undermines the importance of body, and indirectly supports the concept of body donation. Hindu mythology is full of tales where human body parts are utilized for the good of society and other individuals. Islam upholds the idea of preserving human life. The vast majority of Muslim scholars from different schools of Islamic law have cited the need of saving human life as the first priority and have approved organ donation as a necessary means of achieving that admirable goal. Buddhists place a great importance on deeds of kindness and consider organ and tissue donation to be a matter of personal

conscience. It pays tribute to those who give their bodies and organs to improve medical research and save lives. Likewise, the majority of Christian faiths endorse the idea of organ and tissue donation. Donating organs and tissues is seen by Catholics as a selfless and loving act. Superstition and incorrect interpretation of religious texts can lead to people being misled because they are frequently ignorant of the message of their faith. Many Hindus hold that the spirit of the deceased does not achieve Moksha (liberation) if the appropriate religious rites are not carried out on the body after death.

HOW TO IMPROVE THE SITUATION?

To influence society's perception on body donation and increase public awareness of it, organized initiatives are required. One should create a "body donation program". It is time to address the many justifications offered for "no body donation". It is necessary to begin utilizing print and electronic media for awareness efforts. Political, religious, and other well-known public figures should receive widespread media attention for their body donations. Social prestige, acknowledgement, and suitable incentives, such as medical facilities, may be bestowed upon the donors and their families. Prospective donors should be given all the assurances necessary to ensure that their bodies are handled with honour. The value of donated bodies and the donors' emotions should be emphasized to students in order to guarantee that they would handle the cadaver with respect. Once the cadaver has been used, its remnants should be disposed of in accordance with the donor's wishes. For those who are willing, appropriate advice and support about body donation should be widely accessible. In order to respect the donor's wishes, the donor's next of kin should receive appropriate counselling. It is also necessary to persuade the next of kin or close relatives to donate their loved one's body. Social workers and NGOs can be valuable in this area. More cadavers than needed are sent to several Indian medical institutes. For this reason, the necessary legislative actions should be made to allow the transportation of cadavers between states and medical colleges. Intercollege collaboration should also be prioritized.

Mritasanrakshana Vidhi-

According to *Ayurveda*, *Acharya Sushruta* gave a detailed description of *Mritasanrakshana Vidhi*. As a result, the body of the person whose faeces from the intestine are removed should be kept in a cage placed in a flowing river and wrapped in one of *Munja*, *Kusa*, *Shana*, etc. and allowed to decompose. After that, it is removed and gently rubbed with a brush made of hair, bamboo, and *Balvaja* while paying attention to all of the parts, both internal and external above¹⁵. Modern medical science refers to the practice of preserving a dead body as embalming. The Egyptians were the first to perform so in order to preserve the body as a mummy. The femoral sheath is revealed following a 6 cm vertical incision made in the upper limb and medial side of the thigh. The femoral artery can be recognized by its tube-like appearance after the sheath is removed. The injector is filled with around 7 litres of embalming fluid, which is made by combining roughly 5 litres of formalin, 1 litre of glycerine, 1 litre of alcohol, etc. If the body is huge, the amount could go up. The cannula of the injector is inserted after a tiny incision is made in the femoral artery pointing in the direction of the head end and four litres of fluid put in at eight kilograms of pressure. The rest of the fluid pumps in the other direction while the cannula is redirected. Overlay skin on the thigh is sutured¹⁶.

Donating one's body is a crucial necessity in medical education and research. It is also applied to modify novel medical technology.

DISCUSSION

Cadaver is the soul of *Rachana Sharir*. A dead body is known as a cadaver after it has been preserved. Through appropriate propaganda, any government or private organization that is willing to donate bodies can provide the bodies to any medical facility. Body donation is governed by the Anatomy Act of 1949, which states that hospitals and medical educational institutions may receive unclaimed diseased people's bodies (as well as donations of a person's body or any part of it after death) for therapeutic purposes or for the purpose of medical education or research, including dissection and examination of the body¹⁴. We can view muscles, bones, and organs in a life-sized model known as a cadaver in *Rachana Sharira* through a variety of

academic fields. In order to gain a comprehensive understanding of the organ they are observing, students might learn about the structure of the surrounding organs and tissue. Students who comprehend normal anatomy are better able to recognize the practical applications of *Rachana Sharira*. One of the main sources of bodies used for dissection, medical education, scientific study, and research is donations of full bodies.

CONCLUSION

For most people, body donation is an unconscious thought. It is important to make an effort to increase public understanding of the value of body donation. The majority of nations, as well as numerous institutions in our own nation, have effective body donation programs in place to meet their cadaver needs. In spite of this, the global rate of body donation is still below ideal. The majority of Indians are unwilling to donate their bodies. Declaring the significance of body donation makes it imperative to get the word out to the general public. In an effort to improve the low donation levels that exist now, conversations on whole body donation should be promoted. The growth of a person's conscience throughout the process of body donation is rooted in their social obligations. Life is full of inevitable things, including death. When deciding how to dispose of your body after you pass away, please think about donating your entire body and supporting medical research, education, and training to enhance patient care both now and in the future.

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