

Voluntary Body Donation and Its Importance in Medical Education.

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Abstract:

Cadaveric dissection in India is an essential approach to imparting anatomical knowledge to undergraduate and postgraduate medical students. Frequently specialists also use the relevant anatomical part of the cadaver for demonstration dissection or for practising an innovative surgical technique. It is therefore imperative to have a proper system for obtaining cadavers. Although anyone can opt for Voluntary Body Donation, there is no proper drive to promote the same. India being a medley of castes, cultures and systems, the uniformity of acceptance of Voluntary Body Donation is obviously not present. Most of the donated bodies belong to the Hindu religion. With mushrooming of medical institutions in the country, the number of doctors graduating every year is increasing and therefore, number of cadavers received for their training is insufficient. Unclaimed bodies are no more the origin of cadavers. Hence whole Body donation is the need of the hour. When someone donates their body after death, they help to train the next generation of doctors. "This is how good doctors get better. Nothing gets perfected unless it is practiced on cadavers." A survey was carried out among 200 staff members of K. J. Somaiya Medical College during the year of 2014. Voluntary body donation and various factors such as age, sex, religion, culture and donor's attitude were discussed. It was observed that a lot of misconceptions are harboured in the minds of the general population. This paper discusses how we can change the mindset of the public by increasing awareness regarding Voluntary Body Donation. **Conclusion:** There is a need for creating an increased awareness of voluntary body donation using different media as well as publicity by religious leaders and popular public personalities. We should uphold and place in high regard the hundreds of unknown dead people who taught us Anatomy by donating their bodies.

Key words: Cadaveric Dissection, Anatomy, Medical Students, Surgical Techniques, Voluntary Body Donation, Unclaimed Bodies, Awareness.

1. Introduction

Cadaveric dissection in India is an essential approach to imparting anatomical knowledge to undergraduate and postgraduate medical students. Frequently specialists also use the relevant anatomical part of the cadaver for demonstration of dissection or for practising an innovative surgical technique.[1] This proactive experience on human cadavers is essential as a prelude to their clinical training. Thus anatomy is like a foundation course for all medical fields. The study of anatomy is not complete without the use of cadavers. Cadavers also exhibit some new variation or the other which acts as a new source of knowledge. A Voluntary Body Donation is defined as “The act of giving one’s Body after death for Medical research and education”. ‘Anatomical gift’ means: donation of all parts of the human body” Thus a person can give back to society; and give a chance not only to students but also to clinical researchers to learn something that can influence generations to come.[2] Body donation provides the students and medical researchers with unparalleled opportunities to study the human body. The old adage “Practice makes a man perfect” is apropos to medical education. The more a doctor practises on a cadaver, the more perfect his surgical skills will be. Computers or books cannot totally replace dissection in learning anatomy. A few years ago, unclaimed bodies were the only source for medical colleges to obtain cadavers, but nowadays unclaimed bodies are difficult to come by, hence we as medical professionals and especially anatomists, need to create awareness of Voluntary Body Donation on a large scale. This is the need of the hour. Voluntary Body Donation is increasingly being recognised as the highest form of charity that can be performed by a person even after his death. Golchet et al (2000) reported that many factors such as age, religion, culture, personality characteristics, views on death and mortality, body image and humanitarian concerns influence people’s opinion towards Voluntary Body Donation.[3]

Materials and Methods:

A survey was carried out among 200 staff members of Prince Medical College during the year of 2026. Individuals between the ages of 20-65 yrs were subjected to a questionnaire.

The questionnaires assessed the age, sex and religion of the individuals, their awareness and their beliefs regarding Voluntary Body Donation and lastly whether they would be willing to donate their body after death to the medical institutions. The individuals were grouped in two categories, above 40 years and below 40 years. The individuals returned the completed questionnaire.

OBSERVATIONS:

Table: 1

AGE	BELOW 40		ABOVE 40	
	65		135	
SEX	MALE	FEMALE	MALE	FEMALE
	42	23	76	59

Table: 2 **BELOW 40 YEARS**

	MALES		FEMALES	
	No.	%	No.	%
Awareness of VBD	30	71.4	10	43.4
Willingness to donate	6	14.2	3	13.0
Already registered	1	2.3	-	0

Table:3 **ABOVE 40 YEARS**

	MALES		FEMALES	
	No.	%	No.	%
Awareness of VBD	64	84.2	35	59.3
Willingness to donate	48	63.1	21	35.5
Already registered	8	10.5	2	3.3

Awareness regarding Voluntary Body Donation was seen more among the older generation (above 40 yrs) as compared to the younger generation. Only, 14.2% of males below 40 yrs. exhibited willingness to donate even though 71.4% were aware of it. Whereas among males above 40 yrs, 84.2% were aware of Voluntary Body Donation, and 63.1% showed willingness to donate. 10.5% had already registered. Among the females below 40 yrs, 43.4% showed awareness regarding body donation and 13.4% showed willingness to donate. Among females above 40 yrs, 59.3% were aware about Voluntary Body Donation, 35.5% were willing to donate and 3.3% had already registered. Those who had registered did so as they wished to be of some help to the medical profession as well as to show gratitude towards it.

Discussion:

Anatomy is first basic subject studied by undergraduate students of health sciences when they begin their medical career. The teaching of Anatomy is done on cadavers in the department of Anatomy. The ideal cadaver: student ratio should be 1: 10 (cadaver: student). There can never be a replacement for the human body in the teaching of anatomy.[4] With improvement in technology, many assisted models have developed in the form of mannequins and simulations but none of these can be a replacement to a real cadaver. Each cadaver is like a new source of knowledge as many variations can be identified which can help clinicians.[5] There are certain factors responsible for the lack of willingness for VBD among our study population. On enquiring about the reasons for reluctance to donate, it was observed that only persons from the Hindu community were willing to donate, the minority communities were completely unwilling to donate citing religious traditions. Other reasons for unwillingness to donate were that most of the people were under the misconception that unclaimed bodies are easily available in Government colleges and private colleges being commercial can easily afford to purchase these unclaimed cadavers from Government colleges. But the fact is that unclaimed bodies are difficult to come by as rules have become very strict now. Earlier in case of unclaimed bodies, it was the coroner who was responsible for

certifying the cause of death to avoid post-mortem, but now rules have changed and the authority lies with the medical officer of the Government college along with the law enforcing agency. Hence all medical colleges today are totally dependant on Voluntary Body Donation. Some persons simply couldn't accept the thought of having their body dissected. Some even felt that the bodies wouldn't be treated with respect and dignity. All these results suggest that the general public have to be educated and made aware about Voluntary Body Donation being an important and noble act. We must take pains to modify the outlook of the general population towards body donation through awareness campaigns. Voluntary Body Donation is a legal act, governed by the Code of Public Health. It is a voluntary act that a person can do for the progress of medical science. These donations are mainly to medical colleges for teaching and research purposes. [6] Alongside medical colleges, other medical professionals also need cadavers like medical researchers, and surgeons need to hone their skills on the cadavers, including neurosurgeons who require human brains for their study. Cadavers remain an important teaching tool in gross anatomy. Knowledge obtained through dissection of human body is an indispensable part of education for all health professionals. Cadavers help the medical students to master the complex anatomy of the human body. New surgical techniques and new medical instruments are tested on human cadavers by medical professionals first, to enhance their skills and to learn new techniques. It is better to learn on a cadaver how to use instruments than to experiment on patients. The manual skills learnt in the dissecting room are essential in almost every branch of the medical profession. Voluntary Body Donation has also helped in the evolution of an organ bank, skin bank and even a vessel bank. Thus it is a precious gift to the mankind when the need arises. [7] When someone donates their body after death, they help to train the next generation of doctors. "This is how good doctors get better. Nothing gets perfected unless it is practiced on cadavers."

Students don't know the name of the person who has donated their body, and this is an ideal which they will be proud to emulate as doctors in the future- 'To give with little recognition' The demand for cadavers is strong. Ideas have been voiced to augment the supply. Body donation is a generous and unselfish act for those who wish to be useful to the living after death. The donor will help the medical students for further learning and research. Awareness about Body Donation should be raised and mindset of society towards it should be changed. Body donation programs should be designed and its centres should be made mandatory for all medical colleges. Society should accept that "using" body parts is moral and offers a source of health for everybody. Awareness campaigns should be started using electronic media and publicity by religious leaders and popular public personalities.[8] The NGO's and social workers can also contribute. Conesa et al (2004) observed that the medium with the greatest impact on the population is television; the second factor is the press and radio; the third is magazines and talks with friends/family; the fourth is hoardings and posters, and campaigns about organ donation; and the last factor is information given by health professionals. The donors and their families can also be given social honours, recognition and other incentives like health care facilities. Donors should be assured that their bodies will be treated with respect and dignity. [9] Voluntary Body Donation can be endorsed by developing a Voluntary Body Donation programme in each institute. Cadaver pooling' can be done at the district level of state to solve cadaver shortage problem in different institutes.

Body donation and Anatomy act:

Every country has laid down specific laws related to Voluntary Body Donation.

‘The Anatomy Act ‘has been enacted by various states in India to regulate the use of dead bodies for medical research and education. In India the Anatomy act was enacted in 1949, and has been adopted by all states of India. It is “An Act to provide for the supply of unclaimed bodies of deceased persons (and for donation before death by a person of his body or any part thereof after his death) to hospitals and medical and teaching institutions (for therapeutic purposes or) for the purpose of (medical education or research including) anatomical examination and dissection.” [10] Any person of sound mind, who is over 18 years of age can donate his or her body. The eligibility criteria is a natural cause of death which has to be certified by at least a MBBS doctor, having a valid registration number. Some medical colleges in India receive cadavers more than required, so appropriate legal measures should be undertaken to permit the transfer of cadavers from one state to another as well as from one medical college to another. Inter college cooperation should be emphasized.

The Rajasthan Anatomy Act, 1986 regulates the legal acquisition and use of unclaimed bodies for medical education, research, and therapeutic purposes. It empowers authorized officers to hand over unclaimed bodies from hospitals, prisons, or public places to approved medical institutions, overriding the need for immediate traditional disposal. Unclaimed Body is a body not claimed by a near relative or member of the deceased's community/religion within seven days. The authorized officers can transfer unclaimed bodies to approved medical institutions for anatomical examination, dissection, or therapeutic use. Whoever disposes of, or abets the disposal of, an unclaimed body, save as provided by this Act, or obstructs any authority in-charge of a teaching medical institution, or an authorised officer from handling over, taking possession of, removing or using such dead body or the purpose specified in the Act, shall, on conviction, be punishable with fine which may extend to five hundred rupees. All officers of the Police Department and the Medical and Health Department and all officers in the employ of a local authority and all village officer shall be bound to take all reasonable measures to assist any authority or officer authorised under this Act to obtain the possession of an unclaimed body. [11]

Conclusion:

The need for Voluntary Body Donation is great as it plays a vital role in helping students to master the complex anatomy of the human body and provides professionals and researchers with the necessary aids to help the patients of tomorrow. It is a generous act by the donor and a gift for the professionals to progress in the field of medicine. There are a number of misconceptions in the minds of the people, which we as anatomists should try to clear. There is a need for creating an increased awareness of voluntary body donation using different media as well as publicity by religious leaders and popular public personalities. We should uphold and place in high regard the hundreds of unknown dead people who taught us Anatomy by donating their bodies.

Declaration by Authors

Ethical Approval: Approved

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