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Contents

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Body Donation and Its Relevance in Anatomy Learning – A Review

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Abstract:

Body donation is defined as the act of giving ones body after death for medical research and education. Cadavers and donated bodies remain a principal teaching tool for anatomists and medical educators teaching gross anatomy. Anatomy learning without hands on training of dissection on human bodies is never considered perfect. The Anatomy Act provides for the supply of unclaimed bodies to hospitals and teaching institutions for the purpose of anatomical examination and dissection and other similar purposes. In this article, the suitability of body donation, importance of body donation and various factors such as age, religion, culture, personality characteristics, donor's attitudes etc are discussed.

Keywords: Body donation, Anatomy Act, Anatomy learning, unclaimed body.

Introduction:

Anatomy, the study of the structure of the human body is one of the first, most basic and yet one of the most important subjects studied by medical students when they begin their medical career. Teaching and research in anatomy is mainly based on cadaver dissection. A sound knowledge of anatomy is essential from the beginning of a medical education and knowledge obtained through dissection of human body is an indispensable part of the education of health care professionals. With the mushrooming of Medical Institutions in the country, there is ever increasing demand of cadavers for anatomy dissection. Unclaimed bodies are no more the origin of cadavers, but the bodies are coming from body donation programs. The terms Anatomical Donation, Body Donation or Body Bequest are commonly used and synonymous. Body donation is defined as the act of giving ones body after death for medical research and education. Thus a person can give back to society and give a student a chance to learn something that can influence generations to come. According to Delmas (2001), donation is a clear will made by people free and informed. Donation is most often by altruism, conferring life on another. Body donation is regulated by various acts according to each country and is considered one of the modern expressions of solidarity. Relevance of body dissection through the proper use of cadavers is of prime importance before learning living anatomy.

Body donation and Anatomy Act:

The Anatomy Act, enacted by various states in India provides for the supply of unclaimed bodies to medical and teaching institutions for the purpose of anatomical examination and dissection and other similar purposes. Cadavers used by these institutions are usually unclaimed bodies obtained by the police. Occasionally they are donated by relatives of the deceased to teaching institutions according to the dead person's wishes. An unclaimed cadaver can be obtained legally for purpose of dissection. Patnaik (2002) observed that Anatomy Act is a State Act promulgated by the legislature and published in the State Government Gazette. The Act regulates the use of dead bodies for medical purposes. Almost anyone can donate for medical research and education. Age, disease, or state of health does not necessarily eliminate an individual from being a donor, but may affect which organs or tissues are actually used. All donors are screened for infectious diseases including HIV/AIDS, hepatitis B & C, active tuberculosis, syphilis, spore bearing organisms like C. Tetani etc. Donors who are known infected with any of these diseases are declined for donation due to the risk to medical investigators and procurement personnel.

As a result of these basic and expanding needs in medical education and research, the need for body donation remains critical. Fortunately, many individuals have recognized and understood these needs and have bequeathed their bodies. In response to public interest in making these contributions to medical science, state legislatures have enacted laws to support such generosity. In order to remove the discrepancies existing betwixt any two or



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more such acts, Patnaik (2002) suggested that a draft act should be made for all the states to use as model of guiding principles for amendment of Anatomy Acts. It is emphasized that the social aspect need to be molded to suit our requirements. What is lacking is the effective implementation of the provisions of the Act in letter and spirit by all concerned.

Anatomy Act in Indian context:

In India, the Anatomy Act was enacted in 1949, which has been uniformly adopted in all states of the republic of India. It provides for the collection of a dead body for teaching purpose, only if death occurs in a state hospital or in a public place within the prescribed zone of medical institution, provided the police have declared a lapse of 48 hours that there are no claimants for the body and it could be used for medical purpose (Subramaniam, 1999). The Delhi Anatomy Act provides for supply of unclaimed bodies of deceased persons to teaching medical institutions for anatomical examination and dissection. It also provides for procedure for the disposal of unclaimed bodies in hospitals, prisons and public places. Whereas, the Punjab Anatomy Act of 1963 makes a provision for the supply of bodies of deceased persons to hospitals, medical teaching institutions for therapeutic purposes or of anatomical examination, dissection, surgical operation and research work. The Punjab Act provides to take possession of the unclaimed dead bodies in hospitals, prisons, public places for the purpose aforesaid. The Act clearly provides that where a person having no permanent place of residence in the areas where his death has taken place, dies in any public place in such area and his body is unclaimed, the authorised officer of that area shall take possession and should hand over to the authorities in charge of an approved institution for the purpose specified above.

The Mysore Anatomy Act, 1957, later amended as the Karnataka Anatomy (Amendment) Act, 1998 and enacted by Karnataka State defines 'unclaimed body' as "the body of a person who dies in a hospital, prison or public place or a place to which members of the public have access, and which has not been claimed by any person interested within such time as may be prescribed."

Suitability of Donation:

There are various factors that may render the body unacceptable for an anatomical donation and some of these may not be obvious until the time of death. Since donated bodies are used to study the normal structure of the whole human body, normally all donated bodies are not accepted. Some of the reasons for rejection are: (1) autopsied body, (2) decomposition, (3) obesity, (4) extreme emaciation, (5) death from a contagious or communicable disease, (6) suicide or homicide, (7) removal of organs and tissues (except for eyes). Acceptance or rejection of a donated body is a decision, the medical school makes at the time of donation. Under the law, the institution has the right to reject a body donation for any reason.

Importance of Body Donation:

Body donation provides students and researchers with unparalleled opportunities to study the human body. Books and computer programs can't replicate the hands-on method of teaching human anatomy. There is no substitute for the human body in the teaching of human anatomy. The experience and education gained through the use of human cadaver through dissection is far superior and very different than the learning provided by artificial substitutes and textbooks. When someone donates their body after death, they help train the next generation of doctors. The use of human bodies in medical education and research is a centuries old tradition and represents one of the foundations of Western Medicine.

Factors responsible:

Various factors are believed to have attributed towards body donation. In one study, Fennell and Jones (1992) reported that the most common reasons for making a body bequest were to aid medical science, and gratitude to the medical profession. Boulware et al (2004) concluded that demographic and attitudinal factors were found to be strongly related to willingness to consider whole body donation. In another study, Chung and Lehmann (2002) concluded that the existing consent procedures for cadaver donations at United States medical schools did not provide sufficient information to potential donors to constitute a fully informed consent. It was concluded in yet another study by Boulware et al (2002) that various factors such as demographic, cultural, attitudinal, and clinical associated with willingness to donate cadaveric and living related organs affect the general public's willingness to donate organs, but their relative contribution is different for living related versus cadaveric donation. It is also not known which factors might be most responsible for low rates of cadaveric and living related donation among the general public. In a study, 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 body donation.

Religious and cultural attitudes about donation:

All major religions approve of body and organ donation as a charitable act of giving and for medical and dental teaching, research, and transplants. Most express that it is an individual decision. Most major religions support donation as an act of human kindness in keeping with religious teachings. People are often unaware of the attitudes of their faith toward donation; they may be misled by old superstitions or misreading of religious texts. Some people believe that donation conflicts with their faith. They hesitate to give consent for donation. Although specific teachings and requirements related to donation vary, there is general agreement that donating organs or tissues to benefit others demonstrates love for other people. For example, Buddhists believe organ donation is a personal decision and should be left to an individual's conscience. Because donation is a noble act,

Buddhism honours those people who donate their bodies and organs to advance medical science and to save lives. The Hindus are not prohibited by religious law from donating their organs. Donation is an individual decision, but "dharma" ("good duty") suggests that doing good for others is desirable. The Hindu religion is based on the "Law of Karma" and reincarnation. The soul lives forever and is immortal and gets reborn in a new physical form. There is nothing in the Hindu religion indicating that part of the dead human body cannot be used to alleviate the suffering of other humans. Gillman (1999) reviewed the positions of the major faith groups about donation and concluded that the large majority of faiths take a positive stance towards donation. Arraez-Aybar et al (2004) reported that Anatomy teachers are generally in favour of donation (86.5%), especially of organs alone (52.7%) and this aspect was not affected by their religious beliefs.

Donors' attitudes towards body donation:

The attitudes of donors play an important crucial role in body donation. A survey was conducted by Richardson and Hurwitz (1995) to ascertain attitudes of 218 donors towards body donation and reported that the notion of money incentives to promote donation was overwhelmingly rejected. The anxiety of disrespectful behaviour toward cadavers was one of the reasons for not donating bodies. Sanner (1997) in another study concluded that if one is prepared to give from the body in life, one is also prepared to give after death. Sehirli et al (2004) reported that although anatomists encourage cadaver donation, the attitudes of anatomists toward donating their own bodies for dissection is not well known.

Role of mass media:

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There has been lots of resistance towards body donation. According to Cantarovich (2005), some of main reasons are: lack of awareness, religious uncertainties, distrust of medicine, hostility to new ideas and misinformation. Society should accept that "using" body parts is moral and offers a source of health for everybody. Here comes the role of mass media and it has played an important role. Conesa et al (2004) studied the influence of different sources of information such as television, the press and radio, magazines, hoardings and posters, campaign about donation, information given by health professionals etc. towards body donation. It was 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. It was concluded that opinion on donation is more favorable among subjects who have received information on an individual basis and at specialized meetings.

Conclusion:

The execution of an anatomical gift is a gift of life. It can be the ultimate fulfillment of one's own life. 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 to further their learning and research. Patnaik (2002) suggested that one should inculcate the habit of donation voluntarily the body after the death. Voluntary donation of body is not much different from donation of organs including eyes, kidney, liver, heart or simply blood; only a bent of mind is needed. It is seen that the decision of an individual to donate his/her body for anatomical examination is a vital contribution towards the understanding and advancement of medical science. People should be motivated to donate their bodies. The decision to donate one's body for use in anatomy learning and research is one, which should not be made hastily but rather should be based upon sound reasons and convictions. Indeed body donation plays a critical role in helping medical students to master the complex anatomy of the human body and will provide researchers with the essential tools to help our patients of tomorrow. The Government should encourage and promote voluntary donation of dead bodies and the public should be educated and maximum awareness of the importance of body donation be given to ensure that there is no shortage of human bodies in medical institutions.

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