

AWARENESS OF BODY DONATION AND EMBALMING AMONG MEDICOS: QUESTIONNAIRE BASED STUDY

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ABSTRACT

Background: Body donation is a gracious act. Although body donation is extremely important the number of persons who choose to donate body remains low. Most important reason for no body donation in India is lack of awareness. Hence organized efforts are needed to raise the awareness and change the mindset of the society. Medicos are the prime source of information hence, basic knowledge of body donation and preservation including embalming should be known to them.

Aims and Objectives: To assess the awareness and sensitize the medicos regarding body donation and body preservation.

Material and Method: The study was a cross-sectional observational study carried out at Dr. Vaishampayan, Government Medical College, Solapur, Maharashtra during the period of September-October 2017. Participants were divided into three groups: teaching faculty, postgraduate students and interns. A predesigned and pretested, knowledge based multiple choice questionnaire containing 15 questions was used in the study. Data was filled in Microsoft Excel Sheet 2007 and analyzed. Results were expressed in percentage.

Results: When the three groups were compared it was found that overall knowledge regarding procedure of body donation was less in interns compared to faculty and PGs, however all three groups had less knowledge about embalming.

Conclusion: To conclude, our study found that faculty and PGs have a good knowledge of body donation but interns need more sensitization. All the medicos have less awareness of embalming. Hence there is a need of creating more awareness regarding embalming.

KEY WORDS: Body donation, PGs, Faculty.

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INTRODUCTION

Body donation is defined as an informed and free act of giving one's whole body after death for medical education and research [1].

Donation of body to science was 1st heard in 1832, when British Utilitarian Philosopher Jeremy Bentham's body was donated. India first experienced of body donation was in the year

1956, when the body of Pandurang Sridhar Apte was donated to B. J. Medical College Pune, Maharashtra, India. [2].

Body donation is a gracious act. It provides the students and medical researchers with unparalleled opportunities to study the human body and for practicing as well as developing new surgical Techniques [1,3]. Although body donation is extremely important for medical education, the number of persons who choose to donate body remains low. The cadaver to medical/dental students ratio in various teaching institutes of India is 1:25, optimal being 1: 10 [3]. As per the survey carried out by Rokade and Gaikwad 2010, in some medical colleges in Maharashtra, India, a gross insufficiency of cadavers was found in 90.90% of medical colleges [4]. The pool of these cadavers are unclaimed bodies brought by the police while the proportion of voluntary body donation is less [2].

Most important reason for no body donation in India is lack of awareness. Only 22% of the general population is aware that the body can be donated. Other is spirituality and religious belief, fear that the body may not be treated with respect and dignity. Medicos in addition cannot accept the concept of dissection of their own body [4].

With the increasing number of medical seats in past few years the need of cadavers has far exceeded; and this scarcity cannot be replenished with the unclaimed bodies alone [2]. Hence organized efforts are needed to raise the awareness and change the mindset of the society and the medicos in particular, towards body donation.

Family and relatives of the donated body are often apprehensive about the aftermath of body donation hence it is the duty of the institute to explain them, the events related to body donation and body preservation. Medicos are the prime source of information to the society hence, basic knowledge of body preservation including embalming should be known to them.

MATERIALS AND METHODS

The study was a cross-sectional observational study carried out at Dr. Vaishampayan Government Medical College, Solapur, Maharashtra during the period of September-October 2017

with a prior approval from the Institutional Ethics Committee. Participants were divided into three groups: teaching faculty, postgraduate students and interns. Participants who had given written informed consent were included. Doctors from Anatomy department were excluded. A predesigned and pretested, knowledge based multiple choice questionnaire containing 15 questions was used in the study. Questions 1-12 were related to body donation and 13-15 were related to embalming. All selected participants were asked to solve the questionnaire in 15 minutes. Answer keys were handed over to the participants after solving the questionnaire.

Data was filled in Microsoft Excel Sheet 2007 and analyzed. Results were expressed in percentage.

RESULTS

A total of 131 people participated in the study. The participants were divided into 3 groups according to their educational qualification as teaching faculty 33(25.19%), postgraduate student 52(39.69%) and intern 46(35.11%).

Knowledge regarding body donation:

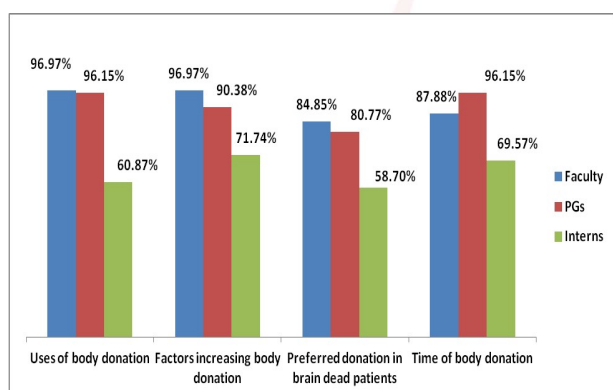
Most of the participants knew death certificate is mandatory for body donation (83.97%) whereas, only 63.36% were aware that two witnesses are required during donation. Of 131 participants 77.86% were aware about the fact that body donation should be done as early as possible after death. Almost all the participants (96.18%) knew the circumstances in which dead body is rejected but merely 67.94% knew the circumstances in which it is accepted. About 88.55% of participants were aware that body donation is charitable and altruistic for donors who want to make use of their body even after death. Only 49.62% knew that body donation can be done at the State Government authorized institute. (Tab.1)

Table 1: Place for body donation.

Sr. No.	Options marked	Percentage
1	Private Institution	3.05
2	Only Government Institution	16.79
3	State Government authorized Institution	49.62
4	Decided by relatives	29.77

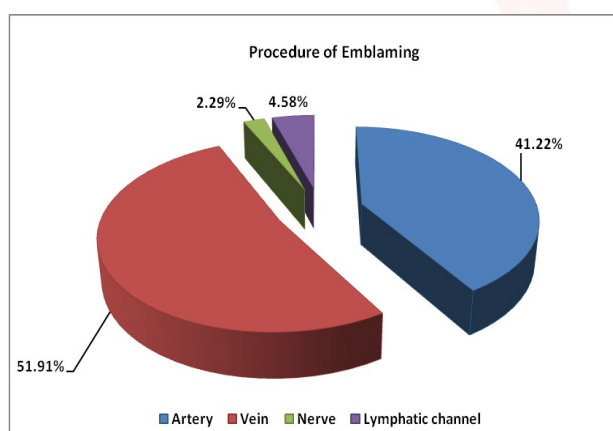
Knowledge regarding uses of body donation, factors increasing number of donations, preferred donation in brain dead patients and time of body donation showed a major difference amongst interns and the other two groups. (Fig.1) Also interns have lesser knowledge (58.7%) ,regarding procedure of filling the body donation form compared to faculty and PGs(78.79% and 65.38% respectively).

Fig. 1: Difference of knowledge regarding uses, factors increasing donations and the preferred donation in brain dead patients amongst three groups Knowledge regarding embalming.



Only 41.22% participant knew embalming is done through the artery, majority had misconception that embalming is done through vein(51.91%). (Fig.2) About 52.67% thinks that formalin is the only chemical used for embalming and only 44.27%, were aware that other than formalin methanol and glycerine can also be used. (Fig.3). 69.47% knew cavity embalming is done for dead body transportation, in delayed cremation as well as supplementary to regular embalming procedure.

Fig. 2: Procedure for emblaming.



When the three groups were compared it was found that overall knowledge regarding procedure of body donation was less in interns compared to faculty and PGs, however all three

groups had less knowledge about embalming.

Fig. 3: Chemical used for Embalming.

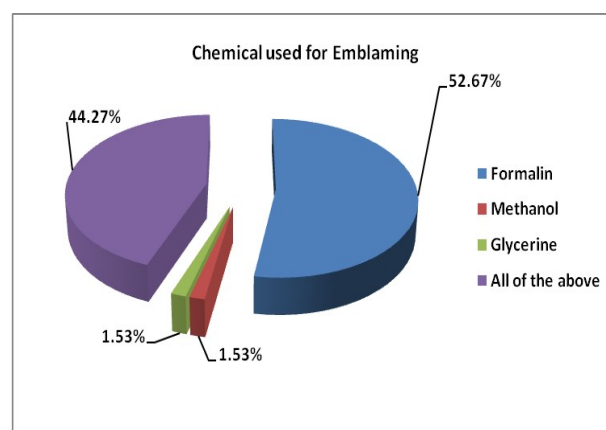
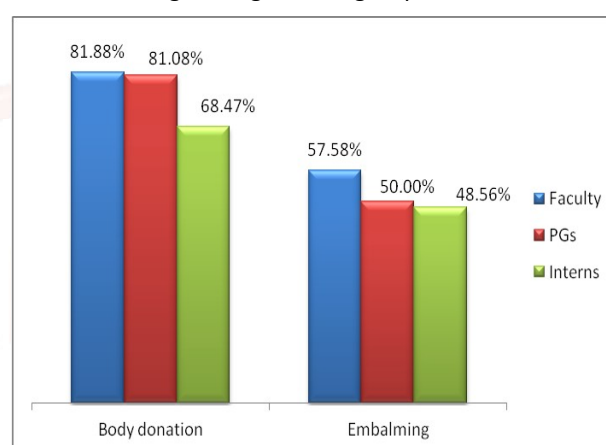


Fig. 4: Difference of knowledge regarding body donation and embalming amongst three groups.



DISCUSSION

Body donation is a voluntary act that a person can do to save lives or to give his body to science. Donations of the body are mainly to the medical colleges for teaching and research purposes. The demand for cadavers remains strong and numerous ideas have been voiced to augment the supply still the number of voluntary body donation is low. One of the major factors for low rate of body donation is lack of awareness. Medicos should be sensitized about body donation and procedure of preservation to answer the common questions raised by donors, but they themselves are less aware and hesitant about body donation. Hence, this study was undertaken to know the awareness of body donation and embalming amongst the medicos [5]. About 131 people participated in the study and were divided into 3 groups faculty, PGs and Interns, as they directly interact with the patients in the health care.

In our study, most of the participants knew about

the documents required during donation of body (83.97%). In the study conducted by Monali et al. only 35% were aware about the documents[3].

According to Bombay anatomy act section 5 B (1) 'If any person, either in writing at any time or orally in presence of two or more witnesses, during his last illness were of he died, has expressed a request that his body, or any part of it be given for therapeutic and research purpose, the person lawfully in possession of his body after his death, may handover the body to authorized medical institution. In our study only 63.36% was aware about the fact that minimum two witnesses are required during the filling of body donation form [6].

In our study 77.86% knew that the body should be donated as early as possible after death. In the study conducted by Monali et al. it was only 35%. However, the percentage of participants who knew the circumstances in which the dead body is accepted is almost same as our study (62% and 67.94% respectively) [3].

Bodies not suitable for donation are postmortem body, decomposed body, body of a medico legal case (e.g. suicide, homicide, accidental death etc), death due contagious diseases (e.g. HIV, AIDS, hepatitis B and C, gangrene etc) and body with organs removed (except eyes). This fact was known almost all the participants (96.18%) of our study [2].

Body donation is a generous and unselfish act for those who wish to be useful to the living after death. About 88.55% participants knew that body donation is charitable act hence even after filling body donation form the donors can reject the donation anytime [7].

Any hospital, medical or teaching institution which has been approved by the central/state government for medical education, research or treatment can accept the body of body donor after death. Many people who are willing to donate the body cannot do so as they are unaware about the place for donation. Even in our study amongst medicos the knowledge about the same was only 49.62%. (Table 1).

Hence, body donation cells should be made mandatory for all medical colleges, also awareness campaigns need to be started using electronic and paper media [4].

The three groups varied in their knowledge with regard to uses of body donation, factors increasing body donation, preferred donation in brain dead patients and time of body donation. Interns had poor knowledge in comparison to the faculty and PGs. (Fig.1). Hence, it is the need of an hour to include the body donation lectures during the orientation programme of interns.

Overall it was found that faculty and PGs have a good knowledge of body donation but interns need more sensitization. In our study overall percentage of awareness regarding body donation was 76.84% while in the study conducted by Dope et al. the awareness was only 68%.

Embalming, is the art of temporarily preserving human remains to forestall decomposition and make it suitable for display at a funeral on the other hand a science of preserving human body for anatomical research and study. Many literatures have quoted that donors are mostly educated population and are always curious to know how the body is going to be dealt after the donation. Medicos should have a basic knowledge of embalming since they are the first source of proper information to the donors. However, in our study all three groups were less aware of embalming procedure [8]. (Fig. 2, 3,4)

CONCLUSION

To conclude, our study found that faculty and PGs have a good knowledge of body donation but interns need more sensitization. All the medicos have less awareness of embalming. Hence there is a need of creating more awareness regarding embalming.

RECOMMENDATIONS

Developing Voluntary Body Donation program/units in each institution to address the issue of scarcity of cadavers.

Compulsory inclusion of body donation lectures in first year M.B.B.S syllabus and during orientation programmes of interns

'Cadaver pooling' at District/State/National level may help to solve the issue of acute shortage of cadavers.

Publicity campaigns through media for creating awareness on Body Donation.

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Conflicts of Interests: None

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