



Anesthesiology

STUDY OF KNOWLEDGE, ATTITUDE, AWARENESS OF BRAIN DEATH, ORGAN DONATION AND TRANSPLANTATION AMONG CLINICAL POST GRADUATE STUDENTS AT RURAL TERTIARY CARE CENTRE, LONI.

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ABSTRACT Demand for organs is increasing faster than its availability for transplantation. Organ donation is successful when health care workers enthusiastically participate in public awareness activities. The attitude of health care specialists is of utmost importance. Hence we conducted a study among clinical postgraduate students. **Materials and Methods** -A cross-sectional questionnaire-based study was conducted among postgraduate medical students in rural tertiary care hospital, Loni. Post graduate students of all three years of clinical departments were part of the study. Anonymity and confidentiality of respondents was maintained. Ethical approval for this study was obtained from the Institutional Ethical Committee. The survey included 29 questions and was divided into four parts. The first part dealt with personal data, second part with the variability of knowledge , third part with attitude of participants and fourth dealt with the awareness. **Results** - Out of 181 postgraduates, 121 participated voluntarily in the study with 50.8% males and 49.2% females. 82.6 % were sure of diagnosing brain death and 10.6% were confused. 80.2% were aware of laws concerning organ donation, 66.9% were aware of 'Green corridor'. 95.9% were ready to promote organ donation and 76.9% showed interest in participating for counseling of organ donation with 72.7% ready to pledge organ donation after death while 19.8% were confused regarding it. 71.9% attributed RTA as cause of brain death. 8.3% were under perception that there is a transplantation team in our setup with 33.1% being confused regarding it. **Conclusion**-Despite appreciable knowledge, there is deficit in awareness regarding organ donation among postgraduates , so necessary step has to be taken to improve the same at our rural setup. After that participants can initiate for organ donation.

KEYWORDS : brain dead, organ donation, organ transplantation, postgraduates

INTRODUCTION:

A potential organ donor is defined by the presence of either brain death or any catastrophic irreversible brain injury that fulfills the brain death criteria.^[1] Brain death is defined as the irreversible loss of all brain functions, including the brain stem. A patient determined to be brain-dead is legally and clinically dead.^[2] Every day, the demand for organs is increasing at a rate faster than its availability for transplantation.^[3] Out of 9.5 million deaths annually in India, nearly 100,000 are due to organ failure. Among 100,000 brain death people, less than 200 actually become donors.^[4] To save and extend lives, organ donation and transplantation have become the only ray of hope.^[5,6] Countries round the world have reported that people's attitude depends on factors such as knowledge about organ donation, attitude of savings others life with their own organ, awareness regarding how one's commitment can change others critical life.^[7] For achieving a successful organ donation chain, health care worker should enthusiastically participate in initiating awareness among general public regarding it.^[8] The attitude of health care specialists is of utmost importance. Lack of knowledge and failure to identify possible donors are important issues, responsible for the shortage of available organs. Clinical post graduates are the front-liners for achieving successful organ donation chain. On their shoulders lie the social and moral responsibility, and their goodwill and hard work can help achieve a lot. Various educational programs suggests newer approaches in solving the organ shortage problems for the fulfillment of this chain, hence clinical postgraduate students need to be educated about organ donation.^[9]

Hence we conducted a study to assess the knowledge, attitude and awareness regarding brain death, organ donation and transplantation among clinical postgraduate students at rural tertiary care hospital, Loni.

MATERIALS AND METHODS:

A cross-sectional questionnaire-based study was conducted among postgraduate medical students in rural tertiary care hospital, Loni. Clinical post graduate students of all three years of departments of Medicine, Surgery, Ophthalmology , Orthopedics , Anesthesiology, Obstetrics and Gynecology, Otorhinolaryngology , Pediatrics, Radiodiagnosis and Radiation-oncology were included for this study. Anonymity and confidentiality of respondents was maintained and participation was voluntary. Ethical approval for this study was obtained from the Institutional Ethical Committee. The questionnaire

was sent in electronic format using Google forms. The questions were modified as per the corrections suggested by the external experts.

The study included 29 questions and was divided into four parts. . The first part dealt with personal data, second part with the variability of knowledge, third part with attitude of participants and fourth dealt with the awareness.

RESULTS:

Out of 181 postgraduates, 121 participated voluntarily in the study. The study included 61 (50.4%) male postgraduates and 60(49.6%) female postgraduates. 13 questions were assigned under the segment Knowledge (Table 1), 6 questions were assigned for Attitude amongst participants (Table 2) and 4 questions for assessing the awareness regarding organ donation and transplantation among the participants (Table 3). 82.6 % were sure of diagnosing brain death and 10.6% were confused. 80.2% were aware of laws concerning organ donation, while 66.9% were aware of 'Green corridor'. About 71.9% considered RTA to be the major cause for brain death, while 89.3% were able to tell the difference between cadaveric and live organ donation. 73% participants were ready to donate their organs after death. Though our set up is lacking with organ transplantation facility, it was observed 58.7 % postgraduates were aware about it.

Table 1: Respondents knowledge regarding brain death, organ donation and transplantation.

	Questions	Yes (%)	No (%)	May be (%)
1	Have you heard of the term organ donation?	99.2	0.8	-
2	Have you heard of the term organ transplantation?	99.2	0.8	-
3	Are you aware of any Law in India related to organs transplantation ?	80.2	12.4	7.4
4	Have you heard about green corridor in organ transplantation?	66.9	31.4	1.7
5	Can a brain dead patient's organs be donated?	97.5	0.8	1.7
6	Do you know, As per Indian Law, How many doctors are required to label a patient as brain dead?	77.7	17.4	5

7	Do you think Donor's and recipient's blood group must be matched?	69.4	20.7	9.9
8	Is organ transplantation the best treatment for any dysfunctional organ?	49.6	26.4	24
9	Will the organ donor be immunocompromised ?	20.7	71.1	8.3
10	Do you have any idea about organ donation related to your speciality?	63.6	28.9	7.4
11	Do you feel donor with any blood disorder (example Leukemia, any coagulopathy) can donate his/her organ?	17.4	75.2	7.4
12	Will the organ recipient be immunocompromised ?	62	27.3	10.7
13	Will you be able to diagnose brain death?	82.6	6.6	10.7

Table 2: Respondents Attitude regarding brain death, organ donation and transplantation.

	Questions	Yes (%)	No (%)	May be(%)
1	Do you like to promote organ donation in our hospital?	95.9	2.5	1.7
2	Do you like to be a part of counselling team regarding organ donation in our hospital?	76.9	7.4	15.7
3	Are you ready to donate your organs to your family members if required?	94.2	2.5	3.3
4	Do u know the difference between cadaveric and live organ donation?	89.3	9.1	1.7
5	Do you feel organ donation a noble act?	97.5	1.7	0.8
6	Are you ready to pledge to donate your organs after your death?	72.7	7.4	19.8

Table 3: Respondents Awareness regarding brain death, organ donation and transplantation.

	Questions	Yes (%)	No (%)	May be (%)
1	Can we retrieve the organs in our hospital?	37.2	28.1	34.7
2	Do you think in our hospital most of the brain-dead patients are related to Road Traffic Accident?	71.9	9.9	18.2
3	Do we have any Team guiding for organ donation in Pravara Rural Hospital?	15.7	50.4	33.9
4	Do we have organ transplantation team?	8.3	58.7	33.1

DISCUSSION:

For successful organ donation and transplantation, awareness amongst health care workers especially post graduate students plays an enormous role. The long term success of any transplant program depends on the knowledge and attitude of people it caters to and hence post graduates have an important task to educate and motivate the people. However, lack of proper education negatively influences organ donation. In a study conducted by Danny Darlington et al there was a huge lack of knowledge among medical students on organ donation.^[10] But in our study, general knowledge of post graduate students about the concept was in adequate range. In our rural tertiary care centre 99.2% postgraduates were knowledgeable about organ donation and transplantation which was significantly higher than majority of the studies conducted earlier. According to the Coad et al study, 95.1% of the studied population were having the knowledge of organ donation and transplantation.^[11] In our study 80.2% postgraduates were having the knowledge of various laws regarding organ donation and transplantation. 75.2% postgraduates knew that blood disorder like Leukemia or any coagulopathy patients were not considered for organ donation as it may lead to immunocompromised state, which can lead to failure of transplantation. A study conducted by Alnajjar HA et al showed that 55.8% were ready to donate their organ after death, while in our study 72.7% were ready to donate their organ.^[12] Success can be achieved only if the postgraduates are well educated about organ transplantation and brain death declaration. Hence, we conducted this study to assess the knowledge, attitude, awareness of brain death,

organ donation and transplantation among clinical post graduates. Another approach to promote organ donation is by prompt identification of suitable brain dead donors which requires trained intensivists.^[13] In our study about 82.6% postgraduates were confident of being able to diagnose brain death.

In our study 69.4% postgraduates knew that blood group compatibility is necessary for organ donation. This was found to be lower as compared to study conducted by Sindhu et al.^[14] Awareness regarding retrieval of organs is negligible in postgraduates. 89.3% postgraduates were aware between cadaveric and live organ donation. Due to higher incidence of Road traffic accidents in our nearby areas and being a tertiary care centre, majority of the cases being brought are brain dead, hence higher percentage of 71.9% postgraduates were aware of it. To save life by organ donation, attitude towards it is very important, hence, 97.5% of postgraduates considered organ donation as a noble act, while 95.9% were ready to promote organ donation and 76.9% were ready to be a part of counseling team regarding its awareness.

CONCLUSION:

Being in a tertiary care unit it is important that all the postgraduate students should undergo training of organ donation as it is a need of the hour. Eventhough the major organ donation is not practiced in the hospital where the study is conducted, the postgraduate students fairly know about the organ donation. One should include the awareness of organ donation as a part of curriculum.

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