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Research Article

Comparison of Awareness of Eye Donation among Medical and Paramedical Students

Abstract

Purpose: To compare the awareness of eye donation and willingness to donate eyes among medical and paramedical students.

Materials and Methods: This is a cross sectional study undertaken in April 2016, among 200 first and second year medical students and 200 BSc nursing students of S Nijalingappa Medical Collage, Bagalkot. A semi-structured questionnaire was self-administered for collecting the necessary information after getting informed consent. The questionnaire was on demographic profile, their awareness on eye donation, sources of information and willingness to donate eyes.

Results: Awareness of organ donation noted was 100 % among medical students and 90% among paramedical students. Mass media such as TV, newspaper, poster, magazine were important sources of information for both groups. 93% of medical students thought the ideal time duration to retrieve eyes is within 6 hours after death and 83% paramedical students gave the correct answer. Paramedical students thought communicable disease and blood group are barriers for eye donation. Willingness to donate eyes was similar in both the groups.

Conclusion: The awareness of eye donation is better in medical students compared to paramedical students, but most of the students in both groups were inclined to pledge for eye donation.

Abbreviations

BSc- Bachelors of science

Introduction

Corneal diseases constitute a significant cause of visual impairment and blindness in the developing world. It accounts for 4% of the estimated 2010 global blindness burden of 39 million¹. The major causes of corneal blindness in the developing world include trachoma, corneal ulceration following xerophthalmia due to vitamin A deficiency, ophthalmia neonatorum, use of harmful traditional medicines, onchocerciasis, leprosy, and ocular trauma [1-4].

There are 50 million blind in the world. India has one fourth of these unfortunates. Approximately 18.7 million people are blind in India [5], and 1,90,000 are blind from bilateral corneal disease. Every year another 20000 join the list. This problem is compounded by a low level of annual procurement of donor eyes which is 18000 annually as per a report of the National Programme for Control of Blindness

and eye awareness [6]. Corneal transplant first performed by Eduard Zirm in 1905 is the most widely practiced [7,8], and most successful [9], clinical allografting. The late Dr. Muthiah started the very first eye bank in India and he performed the first corneal transplant successfully in 1948. The practice of keratoplasty has witnessed phenomenal advances owing to innovations in instrumentation, surgical techniques, and perioperative care, resulting in improved outcomes and cost effectiveness¹⁰. Even after more than 50 years, patients waiting for corneal transplants constitute a considerable backlog which is growing. The need, therefore, is to educate the masses about eye donation in an effort to increase the procurement of corneas [10].

Well informed medical and paramedical students could be expected to influence the eye donation rates [8]. Medical and paramedical person are in a distinct advantageous position as most of the deaths are witnessed or attended by them. Hence if these persons are convinced about the cause of blindness they can create awareness and persuade relatives of diseased to donate eyes. This study was designed to assess comparison

of awareness of eye donation in medical and paramedical students and their willingness to pledge eyes as study done in April 2016.

Materials and methods

The study is approved by institutional review board.

This is a cross sectional study undertaken in April 2016, among 200 first and second year medical students and 200 BSc nursing students of the S Nijalingappa Medical Collage, Bagalkot. A semi-structured questionnaire was self-administered for collecting the necessary information after getting informed consent. The questionnaire was on demographic profile, their awareness on eye donation, sources of information and willingness to donate eyes.

The data were entered and analyzed using open epi software. Chi square and paired t test were performed to compare the data. The p value less than 0.05 was taken as statistically significant.

Proforma

NOTE: Please respond to this questionnaire on eye donation. All the information will be kept strictly confidential. It will be used for research purposes only. Please tick in the brackets, wherever applicable

1. Name:
2. Age:
3. Sex: Male () Female ()
4. Education:
5. Occupation:
6. Socioeconomic status:
7. Address:
8. Have you heard-about organ transplantation?
 1. Yes () 2. No ().
9. If YES, which organs can be transplanted? (Can tick multiple responses)
 1. Heart () 2. Liver () 3. Kidney 4. Lungs () 5. Brain ()
 6. Pancreas () 7. Eye () 8. Others, if any, specify –
10. Do you know that eyes can be donated after death or living?
 1. after death 2. living () 3. both
11. What are the sources of information about eye donation? (Can tick multiple responses)
 1. Newspaper () 2. Radio () 3. TV () 4. Doctor () 5. Nurse ()
 6. Health workers () 7. Magazine () 8. Poster ()
 9. Pamphlets () 10. Others, if any, specify_

12. Eye donation means-
 1. Service to mankind
 2. giving sight to blind
 3. Donation of eyes after one's death. 4. Do not know
13. Ideally time duration to retrieve eyes is within 6 hours after death.
 1. Yes () 2. No ()
14. Any age limit for donor
 1. Yes () 2. No ()
15. The next of kin (first degree relative) has the right to give the consent for Eye donation.
 1. Yes () 2. No ()
16. A person with communicable disease can donate his eyes.
 1. Yes () 2. No ()
17. Blood group is barrier to eye donation
 1. Yes () 2. No ()
18. Eye donation disfigures the face of the donor.
 1. Yes () 2. No ()
19. The donor eyes can be preserved in the eye bank.
 1. Yes () 2. No ()
20. Are you willing to donate your eyes?
 1. Yes () 2. No ()
21. Do you want to know more on eye donation?
 1. Yes () 2. No ()
22. Do you think that there is a shortage of eye donors in India?
 1. Yes () 2. No ()

Results

Two hundred medical and nursing students participated in the study. The age distribution of medical students was 18 years (52,26%), 19 years (72,36%), 20 years (50,25%), 21 years (26,13%) whereas paramedical students 18 years (34,17%), 19 years (58,19%), 20 years (40,20%), 21 years (66,33%) as shown in [Table 1]. There were 80 males (40%) and 120 females (60%) among medical students, 70 males (35%) and 130 (65%) among paramedical students as shown in [Table 2]. There was no significant difference in the distribution of male and female students with regard to age.

It was observed that 100 medical students had heard about organ donation but only 90% of paramedical students heard

about organ donation. 93% medical and paramedical students knew that eyes can be donated only after death. 186 of medical students and 166 paramedical students knew that ideal time duration to retrieve eyes is within 6 hours after death. 102 medical and 112 paramedical student thinks there is age limit for donor. 68 paramedical thinks blood group is a barrier for eye donation whereas 46 medical students thinks the same. Only 14 medical students thinks eye donation disfigures the donor face but 74 paramedical students gave wrong answer [Table 3, 4].

Both medical (82%) and paramedical (81%) students were willing to donate eyes and want to know more about eye donation and 176 (88%) of medical and 174 (87%) paramedical agreed that there is shortage of eye donors in India as study done in April 2016.

Discussion

In the present study 100% of medical and 90% of paramedical aware about organ donation. 39% both medical and paramedical students were aware that eyes could be donated after death. In the study among south India population, 50.7% of the participants were aware of eye donation. In study among hospital staff, 97% of them had good to excellent knowledge about transplantation of various human organs [11]. A large number of students, 138 (69%) of medical students and only 40 (20) of paramedical knew that the donated eyes is used for corneal grafting and 93% of medical and 83% of paramedical knew that ideal time for donation is within six hours of death [8]. A study on medical and nonmedical students

Table 1: Age distribution.

Age	Medical	Paramedical
18	52(26%)	34(17%)
19	72(36%)	58(29%)
20	50(25%)	42(21%)
21	26(13%)	66(33%)

Table 2: Sex distribution.

sex	Medical	Paramedical
Male	80(40%)	70(35%)
Female	120(60%)	130(65%)
Total	200	200

Table 3: Source of information for eye donation.

Source	Medical		Paramedical	
	Number	%	Number	%
Newspaper	146	73	98	49
Television	146	73	98	49
Doctor	130	65	120	60
Radio	74	37	60	30
Nurse	50	25	80	40
Magazine	106	53	50	25

Table 4: Responses to various questionnaire.

Questions	Responses	Medical	Paramedical	Chi square value	P value
1. Knowledge about organ donation	Correct	200	180	4.8	0.0001
	Incorrect	0	20		
	Total	200	200		
2. Ideal time duration to retrieve eyes is within 6 hrs after death	Yes	186	166	9.47	0.001
	No	14	34		
	Total	200	200		
3. Age limit for eye donation	No	98	88	7.6	0.02
	Yes	102	112		
	Total	200	200		
4. Blood group is barrier to eye donation No	No	154	132	11.29	0.0003
	Yes	44	68		
	Total	200	200		
5. Eye donation disfigures the donor face	No	186	126	5.24	0.0001
	Yes	14	74		
	Total	200	200		
6. Donor eyes can be preserved in the eye bank	Yes	150	132	3.8	0.02
	No	50	68		
	Total	200	200		

also observed that 79.6% of medical students knew that eyes can be donated after death and 63.3 %knew that it should be done within six hours.

Our study showed that 164 (82%) of medical and 162 (81%) of paramedical students were willing to donate eyes and 176 (88%) of medical and 174 (87%) paramedical agreed that there is shortage of eye donors. In the study among optometry students, 64.5% of the respondents were willing for eye donation [12]. Another study in the urban population observed that 73.8% were aware of eye donations and only 44.9% were willing to pledge their eyes [13].

Mandatory consent for donation expressed before the death of the donor should form the basis for eye donation ideally. However, in case of unavailability of such consent, consent from adult family members of the deceased donor should be obtained for eye donation. In a study done on the responses of relatives of post-mortem donors, only 44.3% of relatives of such cases gave consent for donation after intensive counseling [14]. Mass media in the form of television, newspapers, magazines and posters were important sources of information on eye donation. Other studies also found publicity campaigns and media to be the major sources on this issue [13].

The awareness of eye donation is better in medical students compared to paramedical students, but most of the students in both groups were inclined to pledge for eye donation. There is need to create awareness about eye donation in paramedical students. The medical and paramedical students could be actively involved as volunteers in eye donation campaigns, where in after proper training in counseling techniques, they can act as counselors for eye donors.

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