

Awareness about eye donation among participants attending eye donation CME program

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Abstract

Background: Corneal diseases are the significant causes for visual impairment and blindness worldwide especially in developing countries like India. This can be treated by corneal transplantation for which eye donation is essential. The number of corneal transplants done is very less than actual requirement largely due to inadequate number of corneas collected. Medical students of second and third years can influence and motivate people for eye donation. **Objective:** To assess the awareness and perception about eye donation among participants before conducting an eye donation CME (continued medical education) program. **Settings and design:** Cross sectional study. **Material and methods:** Semi structured questionnaire **Results:** Out of 211 participants who have participated in study, 99% were aware of about eye donation after death but only 38% knew that the ideal time of eye donation is less than 6 hours of death. Knowledge of the fact that cornea can be removed and grafted was found in 47% of them. Most of the respondents (85%) were willing to donate their eyes. **Conclusion:** The study revealed that majority of respondents were aware of eye donation but there is a lack of knowledge and motivation related to eye donation. The perceived reason for not donating eyes is to be considered while creating awareness.

Key words: Awareness, Eye donation, CME Program.

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INTRODUCTION

Corneal diseases (corneal ulcer following xerophthalmia due to vitamin A deficiency, ocular trauma, ophthalmia neonatorum, trachoma, bullous keratopathy, keratoconus etc.) are important causes of blindness in developing countries like India^{1,2,3,4} and ⁵ It constitutes 0.9 % of blindness in India.⁶ Approx. 18.7% million people are blind in India⁷ and 190,000 are blind from bilateral

corneal disease. There is further addition of 20,000 corneal blind persons every year.⁸ According to the eye bank association of India, the current procurement rate of cornea in India is 22,000 per year.⁹ According to union health ministry only 30% of donated eyes are suitable for corneal transplantation.¹⁰ As per the current ratio of available safe donor eyes, we need nearly 20 fold increase of eye donation to do 100,000 corneal transplant per year.¹¹ Raising the level of public education on eye donation is an important first step, to increase procurement of cornea. While majority of health care professionals support organ donation, only few had committed to sign organ donation card.¹² and ¹³ This may be due to influence of personal attitudes and belief of general public.¹⁴⁻¹⁹ Health care providers can be expected to influence eye donation by motivating people to pledge their eyes.

AIMS AND OBJECTIVES

- To assess awareness of eye donation among health care professionals.
- To find the source of information about eye donation.
- To assess the knowledge of organ donation act.
- To assess the reasons for donating or not donating eyes.

MATERIAL AND METHODS

Type of study: Cross sectional study design
Settings and Sample size: Total of 211 participants comprising of various faculties of medical, Paramedical, Nursing and Physiotherapy College, under graduate medical students, administrative staff and health workers those have attended the CME.

The purpose of this study was explained to all participants before obtaining their verbal consent. A pretested, semi-structured questionnaire was self administered for collecting information regarding awareness of various aspects of eye donation, reasons for donating or not donating eyes and source of information.

RESULTS

Out of 211 participants, 94 (44.54%) were males and 117 (55.45%) were females. Age group varies from 18 years to 64 years. Out of 211 participants, it was observed that 99.05% (209) participants knew that eyes can be donated after death but only 54.02% (114) knew the ideal time for

eye donation. 62.08% (131) participants knew that there is shortage of eyes for corneal transplantation. 72.03% (152) participants knew that donated eyes can be used for corneal grafting. 27.96% (59) participants think that a person with communicable diseases can donate eyes. 63.5% (134) participants opined that there is no age limit for eye donation. 50.71% (107) participants believe that one donor can give vision to two blinds. 55.92% (118) participants say that names of donor and recipient will not be revealed to anyone. Only 4.26% (9) participants knew that eyes can be stored for 24 hours before corneal transplantation. 26.54% (56) participants were aware of presence of eye bank in surrounding. 13.74 % (29) participants believe that eye donation can cure all types of blindness. 36.96% (78) participants knew that eyes should be closed immediately after death. 53.08% (112) participants opined that it is not necessary to pledge for eye donation before death. 81.04% (171) participants believe that it is not necessary to transport donor to hospital. 29.85 % (63) participants were aware of organ donation act. Only 00.47% (1) participant was aware of a person who has donated eyes but none have any knowledge of a patient who has received the donated eyes. 84.83% (179) of participants were willing to donate eyes and most of them cited it as noble work as a reason for eye donation. 81.99 % (173) participants revealed media as their source of information.

Table 1

S. No	Questions	Common response	N (%)
1	Whether eyes can be donated after death	Yes	209 (99.05%)
2	Whether donated eyes can be used for corneal grafting?	Yes	152 (72.03%)
3	Is there shortage of eyes in India?	Yes	131 (62.08%)
4	What is the ideal time for donating eyes?	Within 6 hours	114 (54.02%)
5	Can a person with communicable eye disease donate eyes?	Yes	152 (72.03%)
6	Is there any age limit for eye donation?	No	134 (63.5%)
7	Whether one donor can give vision to two blinds?	Yes	107 (50.71%)
8	Whether the names of donor and recipient remain unknown?	No	118 (55.92%)
9	Whether eyes can be stored for 24 hours before transplantation?	Don't know	202 (95.73%)
10	Do you know presence of eye bank in surrounding?	No	155 (73.45%)
11	Can eye donation cure all type of blindness?	No	182 (86.25%)
12	Whether closing of eyes is the immediate measure to be taken after death?	Don't know	133 (63.03%)
13	Is it necessary to pledge before death for eye donation?	No	112 (53.08%)
14	Is it necessary to transport donor to hospital?	No	171 (81.04%)
15	Are you aware of organ donation act?	Don't know	148 (70.14%)
16	Whether you know a person who has donated eyes?	No	210 (99.52%)
17	Whether you know a person who has received donated eyes?	No	211(100%)
18	Are you willing to donate eyes?	Yes	179 (84.83%)
19	What is your source of information?	Media	173 (81.99%)

DISCUSSION

A large proportion of corneal blindness is avoidable.²⁰ Though the strategy to prevent corneal blindness is more cost effective, corneal transplantation remains the main

treatment option for corneal blindness. There is a significant and constantly growing backlog for corneal transplantation.²¹ In the present scenario, raising the level of understanding about eye donation is an important step to increase procurement of eyes.¹⁹ and ²² Health care

providers of various streams can be involved in motivating their relatives and public for eye donation.²³ In the present study 99.05% participants had knowledge of eye donation. In a study conducted by Singh *et al*, among medical students 99.4% participants were aware of eye donation.²² In another study among the south Indian population, 50.7% of participants were aware of eye donation.¹¹ A large number of participants, 72.03% knew that donated eye is used for corneal grafting and 62.08% knew the ideal time for donation is within 6 hours of death. A study by Saini JS, among medical and nonmedical students observed that 79.6% of medical students knew that eyes can be donated after death and 63.3% knew that it should be done in 6 hours.⁹ Another study in general population showed that awareness level on eye donation to be 73.8%.²⁴ Present study showed that 62.08% (131) participants agreed that there is shortage of eye donors. In a study done by Pankaj kumar mishra *et al* 75.8% of students of nursing college were agreed that there is a shortage of eye donors.²⁵

The whole eye removed from the donor can be stored in the refrigerator (moist chamber technique) up to 48 hours and corneo-sclera button taken from donor eyes can be stored up to 14 days in Optisol medium before transplantation.²⁶ In this study only 4.26% students knew that eye can be stored up to 24 hours which is less compared to 11.5% in study of M K Bharti.²⁶ In our study only 26.54% participants were aware of eye bank facility in their vicinity whereas the study by Gupta A, among nursing students 32.9% students knew about the appropriate place for eye donation.²¹ In present study, 84.83% of participants were willing for eye donation whereas in a study by Saini J S, among medical students 87.8% of respondents were willing to be eye donors.⁹ The main reason cited for eye donation in this study is nobility of work and pleasure to give vision to blind person but lack of awareness, religious restrictions to separate body parts after death and fear of disfigurement of face were the main reasons for not donating eyes. Similar reasons were reported in other studies.^{27 and 28} In present study, media (television, newspapers, magazines and posters) was the main source of information in 81.99% of participants. Other studies also found publicity campaigns and media to be the major source of information.

CONCLUSIONS AND RECOMMENDATIONS

The present study revealed that most of the participants were well aware of eye donation and most of them were willing for eye donation. The perceived reasons for not donating eyes should be considered before creating awareness about eye donation in community. The health care providers of various disciplines is still the

underutilized force and can influence eye donation by contributing in spreading awareness and motivating people about eye donation in community.

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