INTRODUCTION

According to world health organization blindness is when the visual acuity is 3/60 or less. At present, there are approximately 45 million people who are blind in the world. 90% of the blind people are living in the developing countries while others in the developed countries and figures are expected to increase markedly in the coming decades. In India it has been evaluated that 18.7 million people are blind, whereas in Pakistan there are about 1.14 million blinds adults.

In the developing countries corneal blindness is the second most prevalent cause of blindness with cataract being on the top. 6-8 million people are reported for corneal blindness in the world. The major causes of corneal blindness are trachoma, keratoconus, ophthalmia neonatorum, corneal ulceration following xerophthalia due to vitamin A deficiency, onchocerciasis, ocular trauma, leprosy and the usage of harmful medicines. Corneal transplantation is possible for sight renewal; however, it is extremely dependent on voluntary eye donation by applicable donors.

The newly techniques in corneal transplantation have markedly reduced the array of factors which start the opacification of the graft soon in the postoperative period, so that the factors that play the role in failure of the graft can today be more acknowledged, described and prevented.

Trained medical students could be expected to clout eye donation rates and education of doctors initially in their courses may lead to better acquisition rates for donor

ABSTRACT

Aims: To compare the level of awareness and willingness of eye donation between first and last year medical students of Karachi, Pakistan.

Methodology: A total of 1010 medical students were selected from 4 different medical universities of Karachi through random sampling of which 524 (52%) were first year students and 486 (48%) were final year students. Cross sectional study design was conducted to access their perception towards eye donation. For this a self-administered semi structured questionnaire was used which covered individual’s awareness, willingness, source of information and compelling factors for eye donation. Results: 522 out of 524 first year (99.6%) and 486 out of 486 final year (100%) medical students were well aware of eye donation. Willingness to donate eyes after death was seen in only 151/524 (28.8%) first year students and 217/486 (44.6%) last year students. Most common source of information for first year students regarding eye donation was through mass media, TV and radio 320/524 (61%) however for the last year students it was through exposure in hospitals and information by medical specialist 311/486 (64%). Lastly humanitarian grounds was considered most common promoting factor for eye donation by both first (368/524 (70.2%)) and last (359/486 (73.8%)) year students. Conclusion: Awareness of eye donation was found high among both year of students despite this fact very less number of students were willing to donate eyes. This reflects that having awareness of eye donation isn’t enough thus measures should be taken to promote students to donate eyes by encouraging them to help the needy, inciting them with religious benefits and clearing any misconceptions about religion and ethical issues in this regard.

Keywords: Eye donation, students, awareness, perspective.

Eye Donation’ in Medical Students’ Perspective

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INTRODUCTION

According to world health organization blindness is when the visual acuity is 3/60 or less. At present, there are approximately 45 million people who are blind in the world. 90% of the blind people are living in the developing countries while others in the developed countries and figures are expected to increase markedly in the coming decades.
Generally organ transplantation has been misunderstood or restricted because of religious and ethical implications as some universal scholars and jurists boost xenotransplantation research but they disagree donation from human living or departed because the human body is a stewardship from God and it must not be dishonored after death. It is important for doctors to study these factors and apply them accordingly to educate the masses regarding organ donation, in this case about corneal donation. The objective of this study is to access the perception of the medical students in Pakistan regarding eye donation and to evaluate the factors influencing their decision regarding the issue.

MATERIALS AND METHODS

This cross sectional study was conducted among medical students at four medical colleges in the city of Karachi, from September 2015 to April 2016. Ethical board clearance of all four institutions were obtained prior to the start of the study. Students were briefed regarding the scope of the study and oral and written consent was taken before the start of the study. They were also told regarding the confidentiality of their identity. Only first and final year students were included in the study without any barrier of age and sex to participate. The rationale to get data from only two years (first and final) of medical school was to access whether there has been a change in perception after four years of medical education. The perception of Eye donation of the medical students was assessed by using a self-administered semi structured questionnaire, which included question regarding their beliefs of eye donation, their willingness to donate and general awareness of the donation procedure. The data were entered and analyzed using Statistical Package for Social Software version (SPSS) 17.

RESULTS

A total of 1010 out of 1100 initially recruited students filled the questionnaire, with a response rate of 91.8%. 48% of the respondents were final year student while 52% were of first year medical school. Almost all student had heard regarding eye donation (99.8%), however only 36.4% (Final/first year Odds=1.5, C.I: 1.33-5.16) students were willing to donate their eyes after death. Among all students, 4.7% and 1.1% of the final and first year students respectively had registered for eye donation with Final/First OR: 4.2 (C.I: 0.34-4.54). Maximum number of students (42%) asserted that the primary source of information regarding eye donation is through mass media/television and radio, however there found a large contrast in between final and first year’s student, where 64 % of the final year students obtained information from hospitals, medical specialists and 61% of the first year students found information from mass media, television. 72% of the students told that they wanted to donate eye on humanitarian basis Final/First OR 1.05 (C.I: 0.76-8.32) followed by medical influence (46.1%, Final/First OR 1.3, C.I: 0.21-2.65). Only 10.3% of the participants considered religion (Final/First OR 1.3, C.I: 0.47-4.22) as the motivation factor while making a decision for eye donation.

DISCUSSION

In this study, 99.8% students knew about the eye donation after death. However, the awareness was 100% in the final year students(n=524 (52%)) as the awareness was 100% in the final year students(n=524 (52%)) and 100% in the first year students(n=486 (48%)) had heard about eye donation(486 (100)), while 522(99.6) registered for eye donation with Final/First OR: 4.2 (C.I: 0.34-4.54). Only 36.4% (Final/first year Odds=1.5, C.I: 1.33-5.16) students were willing to donate their eyes after death. Among all students, 4.7% and 1.1% of the final and first year students respectively had registered for eye donation with Final/First OR: 4.2 (C.I: 0.34-4.54). Maximum number of students (42%) asserted that the primary source of information regarding eye donation is through mass media/television and radio, however there found a large contrast in between final and first year’s student, where 64 % of the final year students obtained information from hospitals, medical specialists and 61% of the first year students found information from mass media, television.

Table 1: Source of Information Regarding Eye Donation in Medical Students

<table>
<thead>
<tr>
<th>SOURCES</th>
<th>Final year medical students(n=486)</th>
<th>First year medical students(n=524)</th>
<th>TOTAL (%) N=1010</th>
<th>Final/First OR (95% C.I)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass media, TV, Radio</td>
<td>104(21.3)</td>
<td>320(61.0)</td>
<td>424(42)</td>
<td>0.30(0.45-6.43)</td>
</tr>
<tr>
<td>Hospitals, Medical</td>
<td>311(64)</td>
<td>89(17)</td>
<td>400(39.6)</td>
<td>3.70(4.89-9.34)</td>
</tr>
<tr>
<td>specialists</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friends/Family</td>
<td>36(7.4)</td>
<td>55(10.4)</td>
<td>91(9.0)</td>
<td>0.70(8.27)</td>
</tr>
<tr>
<td>Others</td>
<td>19(3.9)</td>
<td>52(9.9)</td>
<td>71(7.0)</td>
<td>0.40(3.7-7.22)</td>
</tr>
<tr>
<td>Don't remember</td>
<td>2(0.4)</td>
<td>5(0.9)</td>
<td>7(0.7)</td>
<td>0.4(2.9-25.2)</td>
</tr>
</tbody>
</table>

Table 2: Perception Regarding Eye Donation

<table>
<thead>
<tr>
<th>QUESTIONS</th>
<th>Final year medical students(n=486)</th>
<th>First year medical students(n=524)</th>
<th>TOTAL (%) N=1010</th>
<th>Final/First OR (95% C.I)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heard about eye donation</td>
<td>486 (100)</td>
<td>522(99.6)</td>
<td>1008(99.8)</td>
<td>1.09(0.29-7.14)</td>
</tr>
<tr>
<td>Willingness to donate eyes</td>
<td>217(44.6)</td>
<td>151(28.8)</td>
<td>368(36.4)</td>
<td>1.51(0.33-5.16)</td>
</tr>
<tr>
<td>Have Registered for eye donation</td>
<td>23(4.7)</td>
<td>6(1.1)</td>
<td>29(2.8)</td>
<td>4.29(0.34-4.54)</td>
</tr>
<tr>
<td>Awareness of donation procedure</td>
<td>48(9.8)</td>
<td>18(3.4)</td>
<td>66(6.5)</td>
<td>2.8(1.5-27.4)</td>
</tr>
</tbody>
</table>

Table 3: Compelling Factors for Eye Donation

<table>
<thead>
<tr>
<th>Final year medical students(n=486)</th>
<th>First year medical students(n=524)</th>
<th>TOTAL (%) N=1010</th>
<th>Final/First OR (95% C.I)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanitarian grounds</td>
<td>359(73.8)</td>
<td>368(70.2)</td>
<td>727(72.0)</td>
</tr>
<tr>
<td>Religious consideration</td>
<td>58(11.9)</td>
<td>47(8.9)</td>
<td>105(10.3)</td>
</tr>
<tr>
<td>Influenced by medical indications</td>
<td>260(53.4)</td>
<td>206(39.3)</td>
<td>466(46.1)</td>
</tr>
<tr>
<td>Others</td>
<td>21(4.3)</td>
<td>30(5.7)</td>
<td>51(5.0)</td>
</tr>
</tbody>
</table>
year and 99.6% in the first year of medical students. In a study among the medical students of Delhi showed that 99.4% were aware about the eye donation. In another study among the students of nursing college in Bangalore also showed that 96.8% participants had excellent knowledge about organ donation. Another study among adult population of southern India showed that 50.69% were aware of eye donation and the major source of awareness was publicity campaigns. The present study revealed that 217(44.6%) out of 486 from first year medical students, total 368(36.4%) out of 1010 students were willing to donate eyes. In a study among population of Pakistan 59.9% participants were willing to donate his/her organ/s. In a study among medical students showed 96% of students were aware of eye donation/corneal donation and only 67% of students were willing to donate his/her eyes. Another study among medical students in Delhi displayed that 87.2% participants were willing for eye donation. In another study among the students of nursing showed that 85.1% were willing or had guaranteed to donate their eyes. Although 100% of our final year students and 99.6% of our first year students were aware of eye donations which is a remarkable level of awareness but only 44.6% of final year students and 28.8% of first year students were willing to donate eyes. This reflects that raising awareness about eye donation isn’t only going to increase the number of eye donations. Factors like humanity, religion and medical indications are also important motivating factors to pledge to donate one’s own eyes. Thus awareness in these areas should also be highlighted. By doing so not only the medical students will opt for eye donation themselves but since they are the future health care providers they would be also able to motivate patients, relatives and friends. Furthermore, limiting factors should also be considered for example misconceptions about religion, family objection, fear of disfigurement of body and misconception about delay of burial. Data from the present study suggest that, in final year students the information by hospital has greater level of awareness 64% as compared to first year students 17%(total=39.6%) however, the information by mass media has even high level of awareness in all participants (final year=21.35, first year=61%, total= 42%). In a study among nursing students suggested that television was the major source of information on eye donation for students (77.1%) and newspaper for (72.8%) students. Another study among university students showed that the major source of information was from the mass media/radio/television i.e. 71%(15) Another study among secondary level students revealed that 52.6% students referenced electronic and printed media as a major source of information on eye donation. The leading reason which influenced first and final years’ students to donate eyes was because of humanitarian grounds. (First year 368(70.2%) and final year 359(73.8%) Humanitarian grounds includes the self-sense of nobility, wellbeing and pleasure to help blind. Another study done in India showed the same result that medical students consider nobility as the main driving force for donating eyes. Another study done in Navodaya Medical College, Raichur, India again showed the same results that there paramedical staff considered nobility and pleasure to help the blind as the most influencing force.

CONCLUSION

The present study suggests that the level of awareness difference regarding eye donation among 1st and final year medical students of Karachi was very significant. The most common source of getting information for eye donation by 1st year students was mass media, TV and radio on the other hand final year students got enlightened through hospitals and medical specialist. However, despite the fact that there is a high level of awareness among medical students still willingness to donate eyes was less than expected. Those who were willing to donate eyes found that the most compelling factor to donate eyes was for the sake of humanity. Thus this exposes that only creating awareness isn’t enough. Students need to be encouraged by inciting factors like help of humanity, religious benefits and medical indications. In addition to this restricting factors should also be cleared like religious and ethical misconceptions through facts.

What this study adds:

1. What is known about this subject?
   - There is a lack of information regarding eye donation in the public, especially in low income countries. More the information about the subject the more donations could be achieved.
   - What this study adds: This study investigates the reasons and rationale for the lower eye donation rate in Pakistan and gives contextual suggestions to overcome them.

REFERENCES


Source of Support: Nil, Conflict of Interest: None