



EVALUATION OF WILLINGNESS AND AWARENESS REGARDING EYE DONATION AT A TERTIARY CARE HOSPITAL

Ophthalmology

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ABSTRACT

Introduction: Eye donation is an act of donating one's eyes after his/her death. Only cornealblinds can be benefitted through this process no other Blinds. World wide, there is a tremendous shortage of corneas. This is primarily due to lack of awareness. The purpose of the study was to attain the perception data regarding eye donation and to create awareness in the community.

Materials and Methods: This study focused on evaluation of willingness & awareness regarding eye donation among a total of 250 attending Government General Hospital with various medical problems. Awareness related questionnaire was "Do you know about eye donation". Personnel who said "yes" were considered as having awareness and these people were provided with questionnaire related to willingness and source of awareness regarding eye donation.

Results: Out of 250, 182 persons were aware about eye donation i.e., 72.8% and remaining 68 persons don't have knowledge about eye donation i.e., 27.2%. Awareness noted increasingly among age group 18-40 years (77.1%), people with higher education (54.9%) and working people (89.3%). 72.3% of people gave the reason for willingness as to help blind persons. Majority of the people who are not willing to donate eye were under misconception of disfigurement of face (69.1%).

Conclusion: Media, State and central health authorities can raise public awareness by conducting campaigns, putting up posters/charts during eye donation week.

KEYWORDS

Awareness, Eye donation, Willingness

INTRODUCTION:

Eye donation is an act of donating one's eyes after his/her death. Only corneal blinds can be benefitted through this process no other Blinds. It is an act of charity, purely for the benefit of the society and is totally voluntary. It is done after death. Cornea is the transparent anterior portion significant cause of visual impairment and blindness in the developing world.

'Corneal Blindness' is a visual impairment that occurs from the cornea becoming clouded, scarred or any other infection that ultimately affects the transparency of cornea, making a person blind. It encompasses a range of eye diseases, injuries or infections that damages the corneal tissues leading to permanent blindness.

India is placed in the top three countries with respect to eye donation, but since the donation is done after the donor is dead, there is need to ensure that families do not relent. "At present there are 700 eye banks in India, out of which only 150 do transplants and out of that 150, only 25 meet the standards[1].

In India, an estimated 4.6 million people with corneal blindness that is curable through corneal transplantation made possible by eye donation.

World wide, there is a tremendous shortage of corneas. This is primarily due to lack of awareness. The cultural and social norms and myths need to be broken, as these are the major reasons for the failure of eye donation efforts. We need to create more awareness and increase the number of eye banks in India to bridge the gap between recipients and donors.

In developing countries, low vision and blindness are two of the most significant health and socioeconomic risks [2]. Shortage of donated eyes in another huge problem. It is well documented that number of individuals waiting for eye transplant (demand) vastly exceeds the number of donated eyes (supply).

Worldwide, approximately 45 million blind persons, among whom 12 million of blind persons is in India including 1% is due to corneal blindness [3]. Most common cause of blindness is cataract (62.6%), followed by uncorrected refractive errors (19.7%), corneal blindness (0.9%), glaucoma (5.8%), surgical complication (1.2%). Posterior capsular opacification (0.9%), posterior segment disorder (4.7%) and

others (4.1%) [4].

In the Year 2000, the number of blind persons in India was estimated to be 18.7 million; by 2010 and 2020 in India, the number of blind persons would increase to 224.1 million and 31.6 million respectively [5].

National programme for control of blindness is funding for management of diabetic retinopathy, glaucoma, ocular trauma, childhood blindness, keratoplasty, squint, low vision, retinopathy of prematurity and also other schemes through public private partnership. For promoting eye donation/eye banking, eye donation fortnight is organized from 25th August to 8th September every year. Andhra Pradesh is one among the states supporting this activity [6].

The purpose of the study was to attain the perception data regarding eye donation and to create awareness in the community.

MATERIALS AND METHODS:

The present research study which is a prospective was conducted at Government general hospital/Government, Anantapuram during June to November 2018. This study focused on evaluation of willingness & awareness regarding eye donation among a total of 250 attending Government General Hospital with various medical problems. Patients who gave consent were included in the study.

Inclusion criteria: age >18 years

Both sexes

Exclusion criteria: Patients with eye problems. This may alter the data analysis, so we didn't include in this study.

A Predesigned questionnaire consists of age, gender, religion, marital status, education status, family income, source of awareness, questions related to awareness and willingness of eye donation.

Awareness related questionnaire was "Do you know about eye donation". Personnel who said "yes" were considered as having awareness and these people were provided with questionnaire related to willingness and source of awareness regarding eye donation.

Data entered in excel sheet, after analysis numbers and percentages were calculated. This data was assessed statistically by using med calcs software includes odds ratio, P value. The P value <0.005 was

considered as significant.

RESULTS:

A total of 250 persons attending tertiary care hospital were included in the present study. Out of 250, 182 persons were aware about eye donation i.e., 72.8% and remaining 68 persons don't have knowledge about eye donation i.e., 27.2%.

Among the study population, 70% were in the age group of 18-40 years and 30% of >40 years. Males were 47.2% of studied population and remaining 52.8% were females.

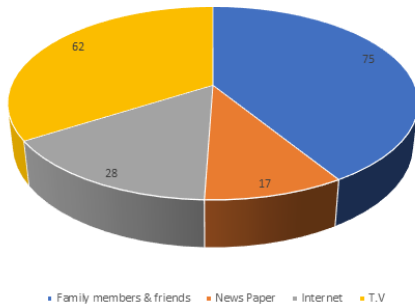
Awareness noted increasingly among age group 18-40 years (77.1%),

Table 1: Number of persons aware about eye donation and their demographic parameters.

Parameters	No. of study population	Percentage	Awareness (n=182)	Percentage	No Awareness (n=68)	Percentage	Odds ratio with 95% CI	P value	Significance
Age									
18-40 years	175	70	135	77.1	40	22.8	2.0106	0.01	SS
>40 years	75	30	47	62.6	28	37.3			
Sex									
Male	118	47.2	86	72.8	32	27.1	1.0078	0.97	NS
Female	132	52.8	96	72.7	36	27.2			
Religion									
Hindu	204	81.6	155	75.9	49	24.01	2.2260	0.01	SS
Others	46	18.4	27	14.8	19	41.3			
Education									
Illiterate	40	16	16	40	24	60	0.2321	<0.0001	SS
Primary	53	21.2	34	64.1	19	35.8			
High school	42	16.8	32	76.1	10	23.8			
PU education	50	20	42	84	8	16			
UG and above	65	26	58	89.2	7	10.7			
Occupation									
Employed	198	79.2	177	89.3	21	10.6	79.72	<0.00001	SS
Unemployed	52	20.8	5	9.6	47	90.3			

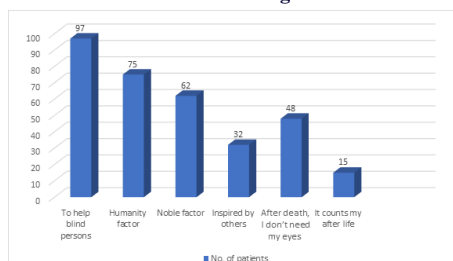
Source of awareness was assessed, has shown 41.2% were aware about eye donation from family members and friends, 34.06% came to know about this by Television, 15.3% by internet and remaining 9.3% of persons came to know by Newspaper.

Fig 1. Distribution of source of awareness



People who aware of eye donation were assessed in this study; their willingness and the reason behind it were noted. 72.3% of people gave the reason as to help blind persons, 55.9% people considered it a humanity factor, 46.2% took as noble factor, 35.8% mentioned as after death, I don't need my eyes, 23.8% of persons inspired by others and remaining 11.1% said it counts their afterlife.

Fig 2. Distribution of reasons for willingness



Reasons for unwillingness were assessed. Majority of the people who are not willing to donate eye were under misconception of disfigurement of face. 69.1% chosen disfigurement of face as reason

people with higher education (54.9%) and working people (89.3%).

Between people who are aware of eye donation and who are not aware were assessed statistically in relation to age, sex, employment, religion, education. Statistical significance observed between the above mentioned two groups in relation to age, religion, education and employment. Most of the population attending in this region were Hindus, so couldn't take exact data of other religions. Pertaining to literacy, population with Pre university and above education were shown higher eye donation awareness when compared to illiterate people and people below the level of pre university education.

for unwillingness, 32.3% reported as religious beliefs, 20.5% think they may born blind in next birth and 5.8% had no reason for unwillingness.

DISCUSSION:

Many a times the people with good eyesight do not know what practical difficulties the visually impaired people must face in day to day life. Eye donation can help ward off shadows of gloom from a blind person's life.

In India, Blindness has been recognized as a major public health problem [7]. It's proud to say that India supports many global initiatives of various health programme and combat issues through state and local health authorities by taking strict actions. One example for this is, for the control of blindness, India was the first country in the world to launch and 100% public funded programme in 1976 [8].

Out of 250, 182 persons were aware about eye donation i.e., 72.8% and remaining 68 persons don't have knowledge about eye donation i.e., 27.2%. Among the study population, 70% were in the age group of 18-40 years and 30% of >40 years. Males were 47.2% of studied population and remaining 52.8% were females. The most important factors for the decision were the definition and time of death, the use of the donated organs, consideration of the relatives and treatment of the corpse.

Ranjana Tiwari et al [9] did a study on awareness assessment on eye donation and willingness in adult population in Gwalior district (M.P.), India with a total population 2192 was surveyed of people residing in central and state govt. Colonies of district Gwalior in which total of 500 houses were taken. The total respondents were 947 in which 481 (50.79%) were Males and 466 (49.21%) were females. The awareness of eye donation was present in 590 (62.30%) while 357 (37.70%) were not aware.

Reshma Patil et al [10] did a study on Eye donation awareness and willingness among shopkeepers, surveyed a total of 1014 persons. Awareness on eye donation noted among 752 (74.16%) shopkeepers out of 1014 subjects. Out of 752 persons who are aware, males were predominantly (75.13%) compared to females (24.87%). Awareness was more in the age group >40 years i.e. 47.87%. Willingness to pledge eyes for eye donation was 19.83%.

Awareness noted increasingly among age group 18-40 years (77.1%), people with higher education (54.9%) and working people (89.3%). Statistical significance observed in relation to age, religion, education and employment. Most of the population attending in this region were Hindus, so couldn't take exact data of other religions. Pertaining to literacy, population with Pre university and above education were shown higher eye donation awareness when compared to illiterate people and people below the level of pre university education as per this study.

Shahbazian et al [11] observed that age, sex, occupation did not influence the attitudes; however, ethnicity. Education level, socioeconomic status increased the willingness for organ donation.

Sujatha Bhandary et al [12] did a study on eye donation awareness & willingness in Malaysia. They reported as 13.2% of studied population (400) had either no formal education or primary education only, 61.3% had secondary education and 25.5% were graduates or post graduates.

Source of awareness was assessed, has shown 41.2% were aware about eye donation from family members and friends, 34.06% came to know about this by Television, 15.3% by internet and remaining 9.3% of persons came to know by Newspaper in this study. Sulatha Bhandary et al [12] documented 55.4% of patients were aware about eye donation from Newspapers, topping the list.

In the present study, 72.3% of people gave the reason as to help blind persons, 55.9% people considered it a humanity factor, 46.2% took as noble factor, 35.8% mentioned as after death, I don't need my eyes, 23.8% of persons inspired by others and remaining 11.1% said it counts their afterlife. Sulatha Bhandary et al [12] observed that Indians are more willing to donate eyes when compared to Malays & Chinese. Manpreet Kaur et al [13] did a cross sectional study in Haryana documented reasons for willingness; majority are willing to donate eyes as the are pleased to help the blind (70.04%). 44.77% persons wish to donate for humanity factor and 38.63% found noble cause. Duggal M et al [14] did a study from Northwestern India in which mentioned 94% of the participants chose for willingness as possibility of "living on" after death, followed by 24% chose humanity factor.

Table 2: Awareness and willingness of eye donation observations by different studies

Studies	Awareness	Willingness
Sulatha Bhandary et al [12], 2011	69	34.42
Yew et al [15], 2005	80.7	67
Reshma Patil et al [10], 2017	74.16	19.83
Present study	72.8	53.6

Majority of the people who are not willing to donate eye were under misconception of disfigurement of face. Manpreet Kaur et al [13], Sulatha Bhandary et al [12] also mentioned main reason for unwillingness to donate eyes was disfigurement of face.

Bharti MK et al [16] conducted a cross sectional study to assess the awareness and knowledge on eye donation among university students. Four hundred (400) students studying first year Medicine, Dentistry, Laboratory Technology, Pharmacy, Biomedicine and Bioengineering degree courses in the University of Malaya. 160 (40%) students were aware that whole eye can be removed from the donor. More than half of the students 231 (57.7%) did not know that the donor eye could be stored before transplantation. The results of this study indicate that there is a need to educate the young adults in our society about corneal transplantation.

Majority of the general public spends short time in a day by watching television, reading newspapers, accessing the internet for information, so media can help in promoting awareness of eye donation. Eye donation is an emotional topic; especially in Asian countries strong cultural and religious beliefs of rebirth and reincarnation have a negative influence on eye donation. Many people are stick on to the above myths and unaware about eye donation. Media should consider it as responsible factors and portray the eye donation in a correct way to increase awareness and benefit the general public.

CONCLUSION:

Publicity campaigns and Media can help to increase willingness of eye donation. Healthcare authorities should take responsibility to create

awareness among Healthcare personnel as well as patients. Media, State and central health authorities can raise public awareness by conducting campaigns, putting up posters/charts during eye donation week.

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