

Various causes of blindness in patients coming for physically handicapped certificate

Bharath kumar G.R¹, Vijayasree S², Bhargavi P.³

1. Associate professor, Department of ophthalmology, Kakatiya medical college, Regional eye hospital, Warangal

2. Assistant professor, Department of ophthalmology, Kakatiya medical college, Regional eye hospital, Warangal

3. Post graduate student, Department of Ophthalmology, Kakatiya medical college, Regional eye hospital, Warangal

Address for correspondence: Dr. Bharat kumar GR, regional eye hospital Warangal Mobile 9849191090

Email: drbhasha@yahoo.com

ABSTRACT

Introduction: Various conditions causing blindness ranges from congenital or acquired. Congenital causes are developmental abnormalities like coloboma, nanophthalmos, congenital glaucoma, congenital cataract. Acquired causes like macular degeneration, phthisis bulbi, corneal opacity, retinitis pigmentosa, optic atrophy etc. affecting one or both eyes making the patient mild to severely handicapped.

Methods: The present study was undertaken to find out the effects of the active principle extracted from the seeds of *Peganum harmala* on isolated smooth muscle and skeletal muscle preparations and the probable mechanism of action

Statistical analysis: percentages and proportions .statistical analysis was done by SPSS 16 software

Results: Out of 215 patients, 154 cases (72%) were male and 61 cases (28%) are females. 80 (37%) cases were between 41-60 years age group. 22% cases were congenital and 78% cases were acquired. Among congenital cases 16 cases were retinitis pigmentosa, 10 cases were amblyopia and 10 cases nystagmus, 5 cases with congenital malformations. Among acquired causes, 71 cases (33%) were corneal opacities, 10 cases (5%) were age related macular degeneration, 20 cases (9%) were phthisis bulbi. Majority of them were agriculture workers 143 cases (67%).

Conclusion: With this study, we can identify various causes affecting the vision of the patient. By knowing extent of the disability either we can counsel the patient those who having sufficient vision to deliver the work or we can recommend the patients those who are really blind for the pension scheme. In turn we can reduce their financial burden to the family and society.

Keywords: blindness, causes, economic burden

INTRODUCTION

Blindness makes the human being to become partially or fully handicapped. Visual impairment and blindness have a

significant impact on the socioeconomic development of individual and society^[1,2]. Visual impairment, which may be defined as blindness - best corrected vision of <20/400 in the better vision eye, or low vision - best corrected vision <20/60 in the better vision eye according to WHO^[3]. Currently there are worldwide as estimated 37 million people with blindness and 124 million people with low vision^[4]. In India various state governments offering reservations to visually handicapped persons in education, jobs, free transportation and offering pension schemes for visually handicapped persons to support them socioeconomically. To utilise these benefits the visually handicapped persons are coming to government hospital to get the certificate. Various conditions causing blindness may range from congenital or acquired. Congenital causes are developmental abnormalities like coloboma, microphthalmia, nystagmus, congenital glaucoma, congenital ptosis, Retinitis pigmentosa, amblyopia, macular dystrophies.^[5] Acquired causes like Glaucoma, Chronic uveitis, corneal opacities, phthisis bulbi, retinal detachment, optic atrophy, age related macular degeneration, Diabetic Retinopathy and anterior staphyloma.^[6,7]

MATERIALS & METHODS

This study included 215 patients came to regional eye hospital Warangal for physically (usually) handicapped certificate. Relevant history of patient's age, sex, occupation, occupation, residence, socioeconomic status and purpose of seeking handicapped certificate was noted.

Detailed clinical examination of both eyes including best corrected visual acuity of eyes, slit lamp examination, intraocular pressure recording and fundus examination were done. Based on history and clinical examination, patients were diagnosed with various congenital conditions^[8] like congenital malformations (microphthalmos, micro cornea, coloboma, nystagmus) congenital glaucoma, Retinitis Pigmentosa, amblyopia and macular dystrophies. Acquired conditions like corneal opacities, phthisis bulbi, retinal detachment, glaucoma, optic atrophy, age related macular degeneration, chronic uveitis, amblyopia^[9], staphyloma, diabetic retinopathy involving one or both eyes noted.

Inclusion criteria were patients coming to regional eye hospital Warangal for physically handicapped certificate while Patients with refractive errors and cataract were excluded from the study.

RESULTS

This series comprises of 215 patients came for physically handicapped certificate.

Table 1. Demographic characteristics of the patients

Variable		Cases	Percentage	95% CI for Proportions*
sex	Male	154	72	65.26
	female	61	28	22.71
	total	215	100	
Age group	0-10	6	3	1.285
	11-20	26	12	8.388
	21-30	21	10	2.546
	31-40	21	10	2.546
	41-50	49	23	7.235
	51-60	41	19	5.731
	61-70	19	9	2.218
	71-80	17	8	4.995
	>80	2	1	0.2555
	total	215	100	
occupation	Agriculture work	123	57	21.06
	Unemployed	54	25	19.79
	Govt.employee	9	4	2.218
	Self-employee	9	4	2.218
	student	20	10	6.103
	total	215	100	
Affected eye	Both eye	68	32	21.78
	One eye	147	68	61.88
	total	215		
causes	congenital	48	22	17.27
	Acquired	127	78	52.39

*calculated by Wilson score

Table 2: causes of blindness

Variable				
S.No.	Diseases	Number of cases	Percentage (%)	95% CI for Proportions
1	Nystagmus	10	5	2.546
2	Ambylopia	10	5	2.546
3	Retinitis pigmentosa	16	7	4.632
4	Macular dystrophy	5	2	0.99
5	Congenital glaucoma	1	0.5	0.082
6	Microphthalmos and Microcornea	2	1	0.2555
7	Coloboma	3	1	0.475
8	Congenital ptosis	1	0.5	0.082
9	Diabetic retinopathy	6	3	1.285
10	Retinal detachment	6	3	1.285
11	Chronic uveitis	10	5	2.546
12	Age related macular degeneration	10	5	2.546
13	Pthysis bulbi	20	9	6.103
14	Corneal opacity	71	33	27.08
15	Optic atrophy	21	10	6.47
16	Glaucomatous optic atrophy	5	2	0.997
17	Empty socket	9	4	2.258
18	Anterior staphyloma	9	4	2.218
	Total	215	100	

Table 1 shows demographic characteristics of the patients.out of 215 patients, 159 (75%) were males while 15% were females.Most of the cases were in group of 41-50 age group (23%), and 51-60 age group (19%). Most of patients were agriculture workers (57%) while 25 % were unemployed.Majority of blindness affected only one eye (68%).

Table 2 shows cause of blindness.out of 215 patients, 48 patients(22%) are having congenital abnormalities, like microphthalmos, micro cornea (2cases), coloboma (3cases), nystagmus (10cases), congenital glaucoma(1), congenital ptosis(1), macular dystrophy(5), retinitis pigmentosa(16) and ambylopia(10). Out of 167 acquired cases (78%),6 patients (3%) diabetic retinopathy,6cases retinal detachment (3%),10 cases chronic uveitis (5%), 10 cases ARMD (5%),20cases Pthysis bulbi(9%),71cases corneal opacities (33%),21 cases optic atrophy (10%),9 cases with empty socket (4%), 9 cases with anterior staphyloma(4%).

Majority cases 71cases (33%) were presented with corneal opacities

DISCUSSION

The purpose of this study is to enlighten the various conditions affecting the one or both the eyes and how this handicappedness effecting the individuals, families and society. Most of the patients are agricultural labourers and are losing their sight or eye posttraumatic. Their illiteracy and socioeconomic status making them to not taking proper treatment leading to pthysis bulbi and corneal opacities, contributing (80%) in this study

Other major group is 48% Retinitis pigmentosa and congenital malformations, which are having consanguinity as a factor.

As majority of patients are having pthysis bulbi and corneal opacities resulted from post trauma, we have to

educate them how to avoid trauma and early treatment to prevent sight threatening complications.

We need to do genetic counselling for patients having congenital abnormalities Most of the patients are one eye blind and claim that they cannot produce active work, by counselling them we can motivate to go to work

CONCLUSION

Majority of the patients are males72% and female 61%, unilateral involvement is more common 68% and bilateral were 32%. Common cause is corneal opacity involving one eye. Most patients are agricultural labourers and illiterates. In spite of having good vision in other eye, many of the patients are not going to work and are claiming that they cannot do work with one eye and staying at home and becoming burden to family.

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How to cite this article : Bharath kumar G.R, Vijayasree S, Bhargavi P. Various causes of blindness in patients coming for physically handicapped certificate. . Perspectives in Medical Research 2019; 7(2):22-25

Sources of Support: Nil,Conflict of interest:None declared