



“TO STUDY OF INCIDENCE AND TYPE OF BLINDNESS IN PATIENT ATTENDING IN THE EYE OPD OF PT.JNM MEDICAL COLLEGE AND DR.B.R.A.M. HOSPITAL RAIPUR(C.G.)

Ophthalmology

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KEYWORDS

INTRODUCTION-

Among the five special senses, the sense of sight is supreme. we absorb 80%of the knowledge through it. Even a partial loss of sight is a more grievous calamity than being deprived of hearing, touch, taste or smell. According to the world health organization (WHO) latest estimates there are 285 million people worldwide live with visual impairment, of whom 39 million people are blind and 246 million people have low vision.

More than 90% of the world's visually impaired live in developing countries.(1,2,3)

However, 80% of this visual impairment is estimated to be avoidable (Preventable and curable).

It is estimated that the number of blind people worldwide will reach 76 million 2020.

Cause of Blindness in India and Chhattisgarh

Cause	India	Chhattisgarh
Cataract	62.8%	71.5%
Refractive error	19.7%	10.6%
Corneal Blindness	0.9%	0.2%
Glaucoma	5.8%	3%
Surgical complication	1.2%	1.6%
Posterior segment disorders	4.7%	6.2%
Others	5%	6.9%

Categories of visual impairment and blindness

Category of visual impairment	Best corrected visual acuity in the better eye
0 Normal	6/6 to 6/18
1 Visual impairment	<6/18 to 6/60
2 Sever visual impairment	<6/60 to 3/60
3 Blind	<3/60 to 1/60
4 Blind	<1/60 to Only light perception
5 Blind	No light perception

AIM- “study of incidence and type of blindness in patient attending in the eye OPD of Pt.J.N.M. Medical college and Dr.B.R.A.M. Hospital Raipur(C.G.)”

OBJECTIVES-

1. To evaluate the magnitude of blindness in the patients attending eye OPD.
2. To find out the commonest cause of blindness in various age and sex groups.
3. To evaluate possible role of early detection of blindness in relation to its cure and rehabilitation.
4. To evaluate the number of cases where medical and surgical intervention would have prevented loss of sight.
5. To find out the number of cases where medical and surgical intervention may cure blindness.

MATERIAL & METHOD-

The present study is observational retrospective study “To study of

incidence & type of blindness in patients attending in the eye OPD of Pt. J.N.M. Medical college & Dr.B.R.A.M. Hospital Raipur (C.G.) from Dec.2012 to Aug 2013.

This study was conducted over 1500 randomly selected in attending in eye OPD.

After selection & fulfilling the proforma each case was enquired of age, sex, residence community education, occupation, urban or rural ,socioeconomic status ,family background , duration of illness , & dimension of vision ,any systemic illness & ocular examination was done.

OBSERVATION-

1.Visual status of Person examined

TABLE - 1 VISUAL STATUS OF PERSONS EXAMINED		
Category	Number	Percentage
Normal{more than 6/18}	526	35.07
Blind{below 6/60}	974	64.93
Total	1500	100

Above table shows visual status of patient examined in OPD
64.93% were categorized as blind, 35.07% were normal.

2.Age wise distribution of patient with blindness

TABLE - 2 AGE WISE DISTRIBUTION OF PATIENT WITH BLINDNESS		
Age group (in years)	Number	Percentage
0 -10	84	8.62
11-40	337	34.59
41 and above	559	57.39
Total	974	100

Above table shows that majority of 57.39% patient were aged 41 and above

3.Sex wise distribution of patient with blindness

TABLE - 3 SEX WISE DISTRIBUTION OF PATIENT WITH BLINDNESS		
Gender wise Classification	Number	Percentage
Male	441	45.28
Female	533	54.72
Total	974	100

Above table shows that 54.72% were female in patient and 45.28% were male.

4. Area of residence wise distribution of patient with blindness

TABLE - 4
AREA OF RESIDENCE WISE DISTRIBUTION OF PATIENT WITH BLINDNESS

Area of residence	Number	Percentage
Rural	563	57.80
Urban	411	42.20
Total	974	100

Above table shows that 57.80% belongs to rural area. 42.20% belongs to urban area.

5. Literacy wise distribution of patient with blindness

TABLE - 5
LITERACY WISE DISTRIBUTION OF PATIENT WITH BLINDNESS

Social Ratio	Number	Percentage
Illiterate	495	50.82
Literate	479	49.18
Total	974	100

Above table shows that 50.82% were illiterate patient and 49.18% were literate.

6. Income wise distribution of patient with blindness

TABLE - 6
INCOME WISE DISTRIBUTION OF PATIENT WITH BLINDNESS

Income wise	Number	Percentage
Low	604	62.01
Medium	330	33.89
High	40	4.10
Total	974	100

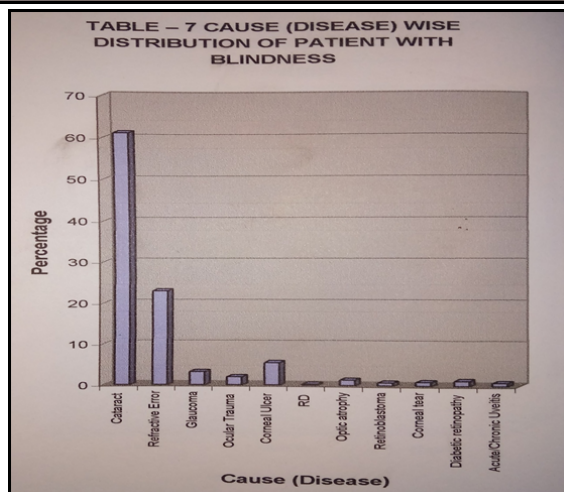
Above table shows that 62.01% were low income group and 4.10% were high income group.

7. Cause (Disease) wise distribution of patient with blindness

TABLE - 7
CAUSE (DISEASE) WISE DISTRIBUTION OF PATIENT WITH BLINDNESS

Cause (Disease)	Number	Percentage
Cataract	596	61.19
Refractive Error	223	22.90
Glaucoma	31	3.18
Ocular Trauma	19	1.95
Corneal Ulcer	53	5.44
RD	03	0.31
Optic atrophy	13	1.33
Retinoblastoma	07	0.72
Corneal tear	09	0.92
Diabetic retinopathy	12	1.23
Acute/Chronic Uveitis	08	0.82
Total	974	100

Above table shows that cataract (61.19%) was the main cause of blindness followed by refractive error (22.90%), corneal ulcer (5.44%), glaucoma (3.18%), ocular trauma (1.95%), optic atrophy (1.33%) and diabetic retinopathy (1.23%).



8. Distribution of cases according to medical management

TABLE - 8
DISTRIBUTION OF CASES ACCORDING TO MEDICAL MANAGEMENT

Management & Surgical Management	Number	Percentage
MM	339	34.80
SM	635	65.20
Total	974	100

Above table shows that medical management done in 34.80% and surgical management done in 65.20%.

9. Avoiding blindness vision

TABLE - 9
AVOIDABLE BLINDNESS VISION (<6/60-3/60)

Total OPD Case	No.	%
Preventive	372	38.20
Curative	602	61.80
Total	974	100

Table shows 38.20% were preventive and 61.80% were curative.

DISCUSSION- Present study "To study of incidence & type of blindness in patients attending in the eye OPD of Pt. J.N.M. Medical college & Dr.B.R.A.M. Hospital Raipur (C.G.) from Dec.2012 to Aug 2013. This study was conducted over 1500 randomly selected attending in the department of Ophthalmology .

The who estimated that there are 37 million blind & 137 million visually impaired people .in the world around 80% of the blindness is preventable. The potential benefit that elimination of blindness would have to raise the quality of life in india. India is able to arrest the increasing incidence of blindness. This is significant as the elimination of blindness is a real possibility and need the meticulous planning and careful implementation that give beneficial result.

The incidence of blindness depend and associated with age, sex, literacy, rural/urban, working slates, socioeconomic status, and also due to type of surgical and medical management.

Comparative analysis of different studies

Table No. - 1
Comparative analysis of different studies regarding age

S. No.	Name of Author	Year of study	Age (yrs)	Highest (%)
1	Kragha IK	1987	No data	No data
2	Taba Tambi F Rev	1993	No data	No data
3	David A Quillen et al	1999	75 above	50
4	C O Bekibele et al	2003	60-74	65.3
5	GVS Murthy et al	2005	70 above	65.5
6	Ohuleye et al	2006	60-79	Majority
7	Dineen B Foster A, Faal H	2006	No data	No data
8	Allingham RR	2008	No data	No data
9	Singabele EJ et al	2010	40-60	40

As compare to above studies my study shows ,majority of patient come under 40 year of age and above. Which was similar to above study.

Table No - 2
Comparative analysis of different studies regarding sex

S. No.	Name of Author	Year of study	Female	Male
1	M Zainal et al	2002	-	1.2 times
2	PK Nirmalan et al	2003	45	55
3	CO Bekibele et al	2003	56.4	43.6
4	GVS Murthy et al	2005	47.3	52.7
5	S Krishnaiah et al	2005	45.7	54.3
6	Australian VIP study	2006	38	54
7	North London Eye study	2006	58.8	75.6
8	Blue Mountains study	2006	56.5	83.8
9	Woldeyes A et al	2008	41	59
10	Singabele E J et al	2010	40	60
11	Present study	2014	54.72	45.28

The present study and almost all studies women exhibit more visual blindness than man and this difference increases with age.

Table No. - 3
Comparative study of different analysis regarding residential status

S. No.	Name of Author	Year of study	Rural %	Urban %
1	Kim WS, Kimis, HU JU, Kim JC, (40)	1990		No data
2	GVS Murthy et al	2005	84.6	No data-
3	S Krishnaiah et al	2005	78	No data-
4	APEDS	2005	87.7	85.4
5	Neena J et al	2007	8.2	7.1
6	Kovai V, Krishnaiah S et al	2007		No data
7	Clare E Gilbert	2008	47	45.7
8	Frimpong-Boateng A et al	2008		No data
9	Singabele E J et al	2010	60	40
10	Present study	2014	57.80	42.20

In the present study most of cases belongs to rural area. As our institute is a Govt. hospital and referral centre hence , these cases were mostly from rural areas.

SUMMARY-

Visual impairment is defined as functional limitation of the eye(s) visual system and can manifest as reduced visual acuity, visual field loss, visual perceptual difficulties etc.

Low vision- visual acuity between 6/18 to 6/60 in the better eye, with the available correction.

Blindness- "Visual acuity if less than 3/60(snellen) or its equivalent"
Inference drawn were

1. Total no. of visual blindness in 1000 our OPD 974 is 64.93%.
2. Majority of cases 57.39% were from >40 years of age group that is similar to the other study and WHO study .
3. The incidence of visual blindness was is higher in female that are 54.72% that is slightly lower than the other study because motivation of female girls child education and health.
4. The incidence of blindness was highest in illiterates that are 50.82% that lower than other study.
5. Most of the people 57.80% were belongs to more in rural ares, that is similar to other study .Due to illiteracy, quick practice, unapproachability to the health centre.
6. The Majority of the cases 62.01% belonged to lower socioeconomic status. That is slightly lower side to other study.
7. The incidence of blindness in different in different diseases wise found cataract 61.19%. Refractive error 22.90%, glaucoma 3.18%, Corneal ulcer 5.44%, diabetic retinopathy 1.23%, Uveitis 0.82%, Ocular trauma 1.95%. Above study were cataract and refractive error are similar in other study and WHO criteria rest of the study are slightly lower than the other study.
8. Out of those 974 people are found visually impairment. In this visual blindness people were 38.20% preventable blindness and 61.80% curable blindness.
9. In this visual blindness people were 34.80% medical management done and 65.20% people were surgical management done.

CONCLUSION- In present study, it is evident that visual impairment (Unilateral as well as bilateral)is much more common as a person's age increases.

Present study shows that predisposing risk factors for cataract are; age over 40 years, poverty, residential status, illiteracy , occupation, exposure to ultraviolet light from the sun ,poorly controlled diabetes, hypertension. There remain inequalities in service delivery, with women (57.80%) and those who are illiterate (50.82%) having lower surgical coverage ,quick practice and unapproachability to the health centre.

So awareness of curable cause of blindness should be made known to the general public through adequate and approachable by the health services .Preventable measures should be eye protections like, use of protracting major lice sunglass, mask, so that helps to prevent from ultraviolet rats, and ocular trauma, F.B exposure alkali & acid burn so the occurrence of corneal ulcer may be checked. Control the diabetes & hypertension decrease the risk of other ocular problem. Avoidable blindness can be prevented at timely intervention it required.

Massive publicity can br done through campaigns, T.V. poster, eye camps with public participation should be carried our in the rural communities specially need participation of the female, so that it increase the people to come early when they notices ant ocular problem specially in their right eye sight.

In my conclusion we should identity the risk factor as early as possible that predisposing an individual to bilateral visual blindness.

A comprehensive approach from primary, secondary and tertiary level of health . It helps early detection of disease like Measles , diabetic retinopathy, refractive error.

Effective eye health promotion involves a combinationof three components: health educate, infrastructure, and advocacy and also the effective inter professional cooperation between emerging madden optometry and more developed ophthalmology.

In eye case delivered by increase the gross route level village health workers should be increase supported by the community . It should be educated about primary eye care.

We should also promote all phases of treatment from active screening and the selection of cases for surgery ro the follow up of interventions and their impact we should also in courage public health awareness, develop a system for the transfer of formation that is effective and improve the cast-effectiveness and capacity of the region to provide high quality services in a large scale,

In India much of the blindness in this Indian population is due to non cataract cases. The previous national survey did not include detailed dilated fundus assessment and visual field examination the policy makes in India should encourage to make well designed population vased epidemiological studies from which to develop a comprehensive long term policy to ve made for prevention of blindness specially cataract.

ABBREVIATION- DOV-Diminution of vision
CCRL-centre circular reacting to light
ARMD-Age related macular degeneration
CDR-Cup disc ratio
HMPR-Hand movement Projection of rays
GNV-Glow not visible
PLPR-Perception of light & Projection of rays .

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