Blindness As Observed in Kathmandu

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The standard of vision by which a person can be considered blind varies from country to country. However for the purpose of giving a pension by the state and also for entering the name of a person in a blind register, most of the countries in the world consider a person blind if either the corrected visual acuity in the better eye is 6/60 or less or the field of vision is less than 20 at the widest diameter.

According to the above standard it is estimated that there are about ten million blind persons in the world. Taking the world population as 3 thousand million, there are about 333 blind persons per one hundred thousand people. In the U.S.A. there were about 356,000 blind persons in 1960 and it is reported that approximately 23,000 persons lose their sight every year.

There is no record of the incidence of blindness or of the common diseases responsible for causing blindness in Nepal. With the hope of gaining a rough idea of incidence and causes of blindness, we started collecting the records of blind person seen in the Eye Department of Bir

Hospital, Kathmandu from the 1st of Baisakh 2023, i.e. 13th of April, 1966. We did not have adequate enough facilities to record the field of vision therefore only visual acuity was taken into consideration for the purpose of considering a person blind. If the corrected vision in the better eye was 6/60 or less, the patients' name was entered in the Register For the Blind. While entering the name of a blind person in the register we also took the history of present and past illnesses in detail and tried to ascertain the cause of blindness as far as practicable. The following points were noted down in the register:—name, age, sex, occupation, address; findings on examination of the eye, uncorrected and corrected vision in each eye, history of present and past illnesses and remarks, if any.

CASE RECORD

The total number of patients entered in the Blind Register during a period of 9½ month was 81. Out of these there were 50 males and 31 females. Thus the ratio of male to female was about 5 to 3.

TABLE 1
Blindness according to sex

Sex.	Number of persons affected.
Male.	50
Female	31
Total	81

The total number of patients attending the Eye Out-Patient Department during this period was 8,500. Thus the incidence of blindness among the patients attending the Eye O.P.D. for medical care come to 0.9% or 953 blind persons per 100,000 eye patients. This figure would have been higher had there been no repetition of names in the outpatient register due to patients losing old tickets and getting new tickets after their names were registered again.

Table II
Diseases causing blindness in both eyes

Diseases	No. of persons affected
1. Corneal ulcer resulting in leucoma adherence etc.	34
2. Glaucoma	15
3. Primary optic atrophy	8
4. Secondary optic atrophy	
a) Brain tumour	3
b) Meningitis	1
5. Iridocyclitis	3
6. Pigmentary degeneration of retina	3
7. Cataract (Congenital)	1
8. Myopia	1
9. Eale's disease	1
Total	<u>70</u>

There were another 11 cases in which there were two different diseases in two eyes. If we consider the diseases affecting the 162 eyes of 81 persons, the table would be as listed below:

Table III

Diseases causing blindness in 162 eyes in 81 patients.

Diseases	Name of eyes affected
1. Corneal ulcer resulting in leucoma adherence etc.	77
2. Glaucoma	35
3. Primary optic atrophy	16
4. Secondary optic atrophy	8
5. Iridocyclitis	9
6. Pigmentary degeneration of retina	6
7. Congenital	
a) Cataract	2
b) Microphthalmos	1
8. Myopia	2
9. Eales' disease	2
10. Neoplasm	
a) Retinoblastoma	1
b) Retrobulbar tumour	1
Total-	162

TABLE IV
Diseases causing blindness according to age group

Ages	C. U.	Glau- coma	P. O. A.	S. O. A.		I. C.	P. D. R.	Cong.		Myopia	E. D.	S. C.	Neoplasm		Total
				B. T.	P. M.			Cat.	M. O.				R. B.	R. T.	
10-14 Yrs.	27	X	2	X	2	1	X	X	1	X	X	X	1	X	34
15-29 Yrs.	14	X	10	2	2	2	2	2	X	2	X	X	X	X	36
30-49 Yrs.	18	7	2	2	X	2	2	X	X	X	2	X	X	1	36
Over 50 Yrs.	18	28	2	X	X	4	2	X	X	X	X	2	X	X	56
Total	77	35	16	4	4	9	6	2	1	2	2	2	1	1	162 Eyes

C. U. = Corneal ulcer resulting in leucoma adherence etc.; P. O. A. = Primary optic atrophy; S. O. A. = Secondary Optic Atrophy, B. T. = Brain tumour

P. M. = Post Meningitic; I. C. = Iridocyclitis; P. D. R. = Pigmentary degeneration of retina, Cong. = Congenital Cat. = Cataract, M. O. Microphthalmos;

E. D. = Eale's disease; S. C. = Senile cataract; R. B. = Retinoblastoma, R. T. = Retrobulbar tumour.

In the present series of cases the commonest cause of blindness was a corneal ulcer which generally resulted in leucoma adherence but in some cases resulted in anterior staphyloma, iris prolapse or phthisis bulbi. As the persons suffering from corneal ulcers were usually poor, illiterate, and uninformed about diseases of the eye, the exact cause of the corneal ulcers could not be determined in a majority of the cases. The following table gives a rough idea of the causes of the corneal ulcers:

Table V
Causes of corneal ulcers

Disease	No. of Eyes affected
Keratomalacia	17
Trauma	12
Trachoma	4
Smallpox	2
Unknown	42
Total	<u>77</u>

DISCUSSION

From this series, it appears that the incidence of blindness is very high (953 in 100,000) among the patients attending the Eye O.P.D. This figure does not represent the exact incidence of blindness in Nepal as it has been obtained from the Eye O.P.D. where only diseased persons come to seek medical advice. However, this can be taken as a random sample from the Eye O.P.D. Our overall impression is that the incidence of blindness is quite high in Nepal. we feel that there are at least 800 blind persons for every 100,000 population. Thus it is estimated that there are about 80,000 blind persons in Nepal.

We are very glad to report that on our request the Central Bureau of Statistics of H.M.G. has agreed to find out the number of totally blind persons in Nepal in the household sample survey being taken in 1967. After we get the survey report we will have a fair idea of the incidence of blindness in Nepal. In a recently conducted blind relief camp at Janakpur (in the eastern terai of Nepal), 58 out of 578 persons examined (10%) were totally blind. Had they been examined with the visual standards mentioned above the incidence would have been enormously high.

From the series of cases presented it appears that there are more blind persons in the age group. In each of the other three age groups the incidence of blindness is almost the same. This suggests that blindness usually occurs initially in the 0 - 14 Yrs age group. The next rise in the incidence of blindness occurs in the age group over 50. If a person becomes blind in childhood he becomes a burden not only to his parents but also to society and to the state. As the longevity of a child is much more than that of a person past 50 years of age, the burden further increases. We also find that the commonest disease responsible for blindness in children is corneal ulcer. This disease is preventable and may also be cured if the proper treatment is given at the proper time.

In the present series, corneal ulcer resulting in leucoma adherence phthisis bulbi etc, is the commonest cause of blindness. Seventy-seven eyes out of 162, i.e. 47%, have been affected by this disease. Keratomalacia has been found to be the commonest cause of corneal ulcer. Seventeen out of 77 eyes, i.e. 22% lost by corneal ulcers were due to keratomalacia.

Glaucoma is the second commonest cause of blindness in the series, affecting as many as 35 eyes. This accounted for about 22% of total blindness. Glaucoma occurred predominantly among persons over 50 years of age. It has been responsible for 50% of the blindness found in people over the age of 50. People are not aware of the symptoms of this disease. Gradual loss of vision in old age, unfortunately thought to be due to a cataract, and the false belief that cataract should not be operated upon unless one stops seeing an object, have prevented people from coming to

a doctor in time. By the time glaucoma is diagnosed, it has become too late— an absolute glaucoma.

Another disease causing a fair amount of blindness in the series is primary optic atrophy. We are astonished to find that 16 eyes out of 162 i.e. about 10% have been affected by this disease, which is a relatively uncommon cause for blindness in western countries.

Iridocyclitis is another important cause of blindness in the series. Nine cases out of 162 were affected i.e. about 5.6% of the total blindness reported was caused by this disease.

Trachoma caused blindness in only 4 eyes, a relatively low incidence taking into consideration the frightening amount of blindness caused in some Middle East countries by this disease.

Small Pox is also, surprisingly, not responsible for many cases of blindness and only two eyes out of 162 were affected by this disease. Similarly, cataract has also caused negligible blindness in the series considering the large number of persons suffering from this disease.

Other causes of blindness like myopia, Eale's disease, pigmentary degeneration of the retina, congenital diseases, neoplasm etc, are not important causes of blindness in our series.

COMMENTS

From the analysis of the present series of case it has been found that corneal ulcer, glaucoma, optic atrophy and iridocyclitis are four commonest causes of blindness. Corneal ulcer and glaucoma combined have caused blindness in 112 eyes out of 162 (69%). Corneal ulcers are preventable and even if they occur, can be cured if the proper treatment is instituted in time.

Glaucoma cannot be prevented. It occurs throughout the world and is a major cause of blindness. But if diagnosis is made in the early stages and the proper medical and surgical treatment can be given in time, many case of blindness can be prevented. It is high time that both the general public and the physicians become aware of the early clinical features of the disease and at the same time fully realise the danger

of this disease if diagnosis is not made in its early stage. The Public Health Department can play a major role in making the public conscious of this dangerous disease.

Iridocyclitis is another disease which is unpreventable and has an uncertain prognosis. Its treatment is also not rewarding but, of course, if the treatment is instituted at an early stage the prognosis may not be very bad. Similarly primary optic atrophy is another dangerous disease whose cause is difficult to determine and whose treatment is even more difficult.

With the present knowledge of medical science, blindness can never be totally prevented in any country let alone the world. But with the proper medical facilities and health conscious people, blindness, can be reduced to a great extent. In Nepal we need many eye specialists and several eye clinics throughout the country to take care of the patients suffering from eye diseases.

CONCLUSION

A register for blind persons has been introduced in the Eye Out Patient Department of Bir Hospital, Kathmandu. 87 Persons out of 8, 500 attending the Eye O.P.D. in 9½ months have been registered in this register. Analysis of the causes of blindness has been made. Corneal ulcers and glaucoma have been found to be the two commonest causes of blindness. Corneal ulcer was responsible for 47% of the blindness reported and glaucoma for 22%. In the group over 50 year of age, glaucoma caused 50% of the blindness.

ACKNOWLEDGEMENT

Our thanks are due to the Superintendent of Bir Hospital for giving us permission to work on the subject of blindness in Bir Hospital and also for allowing us to present the case record. We are grateful to the personnel of the Eye Department for helping us to maintain the record properly.

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FROM THE EDITORS

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समुद्रश्च गम्भीरं नैव शक्यं चिकित्सितम्
वक्तुं निरवशेषेण श्लोकानामयुतैरपि ॥

*"The science of medicine is
fathomless like the sea and
cannot be exhaustively narrated
even in millions of couplets"*

(Sushrnt-Samhitā)

The Nepal Medical Association in general and the Editorial Board of J.N.M.A. in particular express their gratitude and thanks to the members of the ex-editorial board. Without whose continuous effort the publication of the journal might have been next to impracticable. We also congratulate them on carrying out their responsibility with great success.

We bid farewell to them and welcome two of those as advising editors. Some other as consulting editors their help as advising editors will be I hope most valuable service for the present editorial board.

To the readers,

We are very sorry for the delay in getting the issue of the journal in scheduled time due to unavoidable circumstances. However we like to assure them to regularise the issue as practicable. We hope our readers will excuse us.

To the advertisers,

We feel ourselves very much concerned about the helplessness with which we were entangled in getting the issue in time. But we are confident that the advertisers will be generous to encourage us for further issue.

To the members of N.M.A.,

Every member no matter a member of the Editorial Board or not he is editor, subscriber, reader, contributor, writer and critic by virtue belonging to the association. So we request them to contribute and assist by providing articles, news and suggestion for improvement of the journal.

On Skelton's first ocean voyage, he spent about five minutes watching the waves 90 dy and then, as the water became a little choppy, reeled into the diving salon and began to turn various shades of pale green. The diving steward hurried up to him insisting "Come, sir, you can't be sick here".

Skelton looked up painfully "Can't I?" he asked. "Watch".

2. Idle thoughts: few of us can stand prosperity. That is another man's.

3. Edward Arnold sat down in a restaurant one night and ordered a stake. After the usual waiting time, it arrived; Arnold took one look at it and complained to the waiter, "This steak is certainly burned black". "Yes sir," said the waiter. "A mark of respect, sir. Our chief died yesterday".

4. Household hints: "Nothing gives a greater variety to the appearance of a house than a few undraped widows" (House garden)

5. One of a house high-pressure salesman was forcing a house demonstration on a prospective customer. Finishing his preliminary pattern he took a large paper bag from his kit and emptied it all over the woman's beautiful living-room rug. Dust, dirt, but sand and guild cascaded to the rug.