

Pattern of Eye Disorders among Inmates of a Nigerian Prison

By

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SUMMARY

Aim: To determine the prevalence of eye disorders among the inmates of a Nigerian prison with a view to providing eye health care for the prisoners.

Methods: A cross sectional survey of the ocular health status of the prisoners in a Nigerian prison was carried out using a pretested protocol designed for the study. Data was obtained on bio-data as well as anterior and posterior segment examinations. These were analyzed using EPI-INFO version 6.0.

Results: Two hundred and sixty-nine (26.8%) out of the 1005 prisoners examined had eye disorders. The commonest ocular problems noted were presbyopia (21.5%), pterygium (19.3%) refractive error (15.6%) and allergic conjunctivitis (12.5%). One inmate (0.1%) was blind; 12 (1.2%) had monocular blindness while 5(0.5%) had low vision. Cataract was the commonest cause of monocular blindness and also the only cause of bilateral blindness.

Conclusion: The prevalent eye diseases in the prison community are similar to the findings in the general population. There is a need to train the staff of the medical clinics in Nigerian prisons as integrated eye health workers to enable them meet the basic eye health needs of the prisoners.

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INTRODUCTION

The prison is a place designed for retribution, deterrence, rehabilitation and the protection of the public¹. The movement of a prisoner confined to the prison is restricted. Thus his access to health care including eye care is limited.

Some authors in Nigeria²⁻⁵ have reported that cataract, presbyopia, refractive error and conjunctival disorders constituted the commonest prevalent eye problems. Reformation is one of the things expected of a prisoner during the period of incarceration. Books are powerful tools in this direction. A prisoner incapacitated by presbyopia or significant refractive error may not be able to read effectively.

Eye care tends to have low priority rating in most developing countries' general health care. In such countries, isolated and remote communities tend to be particularly neglected. A prison is an example of that kind of community. The Global Initiative for the Elimination of Avoidable Blindness - Vision 2020: The Right to Sight⁶ aims to bring basic eye care to all, including prisoners.

In the face of limited resources, it is important to determine the prevalent eye disorders so that effective planning for eye care programs for Nigerian prisons can be achieved. To the best of the authors' knowledge there has been no study on the ocular health status of the inmates of prisons in south-eastern Nigeria. This study aims to provide initial data on the prevalent eye disorders among the prisoners. This should be of immense help in the planning of an effective basic eye care programme for the prisoners.

METHODS

A cross-sectional survey of the inmates of Nigeria Prison, Onitsha, Anambara State was carried out. On obtaining approval from the Medical Research and Ethics Clearance Committee of the University of Nigeria Teaching Hospital, Enugu, due permission was secured from the State's controller of prisons.

An interviewer-administered questionnaire designed for the study was pretested and refined before using it for the data collection. Information was collected on biodata, personal ocular and family ocular history as well as general health status.

The prison health workers were recruited and trained for the survey. They were given lectures on primary eye care for two weeks before training them on the various tasks. At the beginning of each session of the data collection, the aims of the study and the procedures of the examination were explained to the prisoners in a hall within the prison. Informed verbal consent was obtained from each prisoner at the time of the interview/examination.

The clinic attendants obtained information on bio-data, measured the visual acuity, VA and completed the relevant sections of the questionnaire. The nurses using torchlight and x2.5 head loupe examined the anterior segment. They also measured intraocular pressure using Schiotz tonometer, assessed central visual field by confrontation method and completed the relevant parts of the questionnaire.

An ophthalmologist (EEE) examined the posterior segment of all the subjects using a direct ophthalmoscope. Where necessary the pupils were dilated with tropicamide 1% and phenylephrine 2.5% drops. Additionally the VA and the

findings of the nurses were validated in one out of every 10 subjects. Moreover the ophthalmologist reviewed all the prisoners in whom the nurses noted any abnormality.

Minor disorders were treated at the time of the survey while those that needed surgery or further follow-up were referred to a tertiary eye care centre.

Data was entered and analyzed using EPI-INFO version 6.0.

RESULTS

A total of one thousand and five prisoners were interviewed and examined. Nine hundred and eighty-three (97.8%) were males and 22 (2.2%) were females. The age range was 16-73 years and the mean was 27.26 years± SE 0.2678.

The pattern of eye problems, with a breakdown of the types and their relative prevalence are shown in Table 1. Presbyopia (21.5%), pterygium (19.3%) refractive error (15.6%) and allergic conjunctivitis (12.5%) were the major eye problems encountered.

Table 1
Pattern of eye problems among the prisoners

Type of eye disease	Number	Percent
Presbyopia	76	21.5
Pterygium	68	19.3
Refractive error	55	15.6
Allergic conjunctivitis	44	12.5
Corneal opacity	22	6.2
Cataract	20	5.7
Infective conjunctivitis	9	2.5
Convergence insufficiency	7	2.0
Conjunctival naevus	5	1.4
Exophoria	5	1.4
Ptosis	4	1.1
Others	39	10.8
Total	353	100.0

Distribution of the prisoners by visual acuity in the better eye is shown in Table 2. While the majority (99.4%) had

normal vision, the only blind prisoner had bilateral cataract.

Table 2
Distribution of the prison inmates by visual acuity in the better eye

Level of Vision	Number	Percent
6/6 – 6/18	999	99.4
<6/18- 6/60	5	0.5
<6/60 – 3/60	-	-
<3/60 – PL	1	0.1
NPL	-	-
Total	1005	100.0

Five inmates (0.5%) had low vision. Of these 2 (40% of low vision prisoners) had cataract while one each (20%) had macular degeneration, albinism and retinitis pigmentosa respectively.

Twelve prisoners (1.2%) had monocular blindness. The ocular conditions leading to monocular visual loss were cataract 5, optic atrophy 3, phthisis bulbi 2, corneal opacity and enucleation 1 each. Trauma, 9 and measles, 1 were the aetiological factors for these visual loss.

DISCUSSION

The most frequent ocular disorders noted in this study were presbyopia, pterygium, refractive error and allergic conjunctivitis. This is in keeping with the findings elsewhere ^{4,5}. This shows that although the prison is an isolated and restricted community, the pattern and type of eye diseases among the prisoners is similar to that in the general population.

Presbyopia, a physiological change associated with ageing is known to occur earlier in blacks ⁷. Although the mean age of the subjects in this series was only 27.26years, presbyopia was the commonest eye disorder documented. Identification of such prisoners with presbyopia and provision of reading

glasses will be useful in rehabilitating them.

Pterygium, a degenerative conjunctival disease is a common surgical problem presenting to the eye clinic⁸. In the present study it ranked the second commonest eye disorder. Pterygium therefore is of importance in both hospital and isolated community populations. When pterygium becomes advanced, it crosses the visual axis and can be a cause of monocular blindness. Instituting basic eye care programme for the prisoners will help in identifying such prisoners with pterygium and referring in the early stages.

The prevalence of conjunctivitis was 15%: 12.5% were allergic while 2.5% were infective. An earlier community based survey³ in Anambara State documented a prevalence of 17.38% for conjunctivitis which is comparable with the finding in the current study.

Many prisoners did not realize their visual deficiencies until they participated in the present study. About 80% of blindness is avoidable (preventable or treatable)⁶. Cataract, a treatable cause of blindness, was responsible for the only case of bilateral blindness. Moreover, 83.3% of the monocular blindness in this study was also avoidable. The prison visited was congested and in a deplorable condition. A blind prisoner is greatly handicapped and may have a shortened life expectancy.

In conclusion, the pattern and types of eye disorders in this prison community are similar to the findings in the general population. There is need to integrate eye health care into prison health care system. The prison health workers should be trained in primary eye health care. Some of their nurses should also be

trained in ophthalmic nursing. An appropriate referral system is advocated so that those needing secondary or tertiary eye care can be referred promptly.

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