

Case Report

Blindness Caused by Pterygium – A Case Report

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ABSTRACT

Pterygium leading to bilateral blindness and forcing patient to quit job is uncommon. This is a case report of a 46 year old indigent woman who had blinding pterygia over 10 years. She could not afford pterygium excision offered in a private eye clinic where she initially presented after a period of unsuccessful self medication. She was forced out of sewing job consequent to her inability to thread needle, difficulty reading number on the tape rule and difficulty recognising faces of her clients. Six years later, she presented at eye clinic of the University of Ilorin Teaching Hospital, Nigeria with advanced bilateral pterygia. Having defaulted from clinic over 4 months for lack of fund, the patient, after concession, had successful bilateral pterygia excision using bare sclera technique with Mitomycin C (MMC) dab. There was restoration of the lost vision. Pterygium is a cause of avoidable blindness with consequential impact on quality of life. Eye care providers should identify individual patient challenges to reduce avoidable blindness.

Keywords: Avoidable blindness, Patient challenges, Pterygium, Quality of life

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INTRODUCTION

Pterygium is a common eye condition notorious for conjunctiva redness (which may be of cosmetic implication), lacrimation, itching / grittiness that may cause insomnia/psychological upset and visual impairment resulting from induced astigmatism, glare, and decreased contrast sensitivity (Lin *et al.*, 1989). It is a triangular or wing-shaped conjunctiva encroachment on the cornea, may be atrophic, stationary or progressive (Johnson, 2003; Luanratanakorn *et al.*, 2006) and could induce diplopia. Histologically, pterygium contains elastotic degenerated collagen tissue of the stroma of the conjunctiva. It can be unipolar usually nasal, or temporal. It can be nasally and temporally located, bipolar while bilateral and not necessarily symmetrical do occur. There may be cystic changes of the lesion and rarely calcification and neoplastic transformation are seen (Khamar *et al.*, 2005).

Pterygium exists worldwide however; it is more common in region between latitudes 40° north and south of the equator (Johnson, 2003). Pterygium

used to be regarded as degenerative disease however current evidence suggests a proliferative condition, a dysplasia, or even a benign neoplasm (Johnson, 2003). Though a number of risk factors such as prolonged exposure to warmth, dry and dusty environment, and ultraviolet light have been implicated (Moran and Hollows, 1984; Johnson, 2003), pterygium has been unequivocally shown to be caused by ultra violet light (Mackenzie *et al.*, 1992). Pedigree analysis has demonstrated families with dominant mode of inheritance, although most cases appear to be sporadic (Johnson, 2003). Pterygium has no sex predilection and rarely occurs in individual below 15 years. The prevalence of pterygium increases with age and the highest incidence occurs between the ages of 20 and 49 (Hilgers, 1960). Recurrences may be more frequent in young adults than older individuals. The management of pterygium includes avoiding risk factors such as exposure to smoke/ dust, use of hat/ spectacle to block ultraviolet rays and relief of symptoms using topical lubricants, vasoconstrictors and steroids.

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The definitive treatment is surgical excision with or without adjuvant therapy (Johnson, 2003; Khamar *et al.*, 2005; Luanratanakorn *et al.*, 2006). Advanced pterygium leading to bilateral blindness is uncommon and even unexpected in a setting with available eye care services. This present report is on an indigent middle aged woman living in a city with available eye care services. The blinding advanced pterygia with impact on quality of life is reported.

CASE REPORT

A 46 year old seamstress, mother of five children, presented at eye clinic, University of Ilorin Teaching Hospital (UIITH), Ilorin, Nigeria on account of itching, redness, lacrimation and fleshy growth over both eyes for 10 years. She had enjoyed good vision until 5 years prior to presentation when she noticed diminishing vision. About 3 years before presentation, she noticed she could no longer thread needle and initially relied on seamstress trainees (apprentice) to thread needle for her. She also had difficulty recognising faces especially at a distance and subsequently was having difficulty identifying numbers on the tape rule for measurement.

The progressive diminishing vision forced her to abandon her occupation, sewing. There was history of similar eye problem in her uncle who was a farmer. There was no history of ocular trauma, diabetes or hypertension. She had never used spectacle. During the early part of the condition she applied unnamed eye drops bought from a chemist which temporarily relieved her of itching, redness and lacrimation. She subsequently presented in a private eye care facility in Ilorin about 6 years prior to presentation at UIITH. However, she could not afford the pterygium excision she was offered.

The woman in a normal general clinical state presented at UIITH's eye clinic with visual acuities of counting fingers, right eye (OD) and 2/60, left eye (OS). There were inflamed bilateral nasal pterygia extending to temporal pupillary margin, OD and almost reaching temporal pupillary margin, OS (Figure 1). The anterior chamber and pupils appeared normal bilaterally. There was only glimpse of retina on attempted funduscopy. Intraocular pressure was not attempted with tonometer however; digital palpation appeared normal. A diagnosis of bilateral advanced inflamed pterygia was made and she was placed on steroid eye drops. Her vision improved to 2/60, OD and there was diminished redness in both eyes at

review and 2/52 after. Subsequently, she was counseled for bilateral pterygia excision. She defaulted only to present in the clinic after 4 months amidst a complaint of inability to raise needed fund for the treatment.

Twelve days later and after concession, the patient had a successful bilateral pterygia excision under topical tetracaine and subconjunctival xylocaine with 1:100,000 adrenaline. The bare sclera surgical technique with MMC dab irrigated with normal saline after 1.5 minutes was employed. The eyes were placed on antibiotic ointment and steroid eye drops and followed up in the clinic. The histopathological report of the biopsy specimens confirmed bilateral pterygia (Figure 2).



Figure 1: Bilateral Pterygia Resulting in Blindness in the Patient

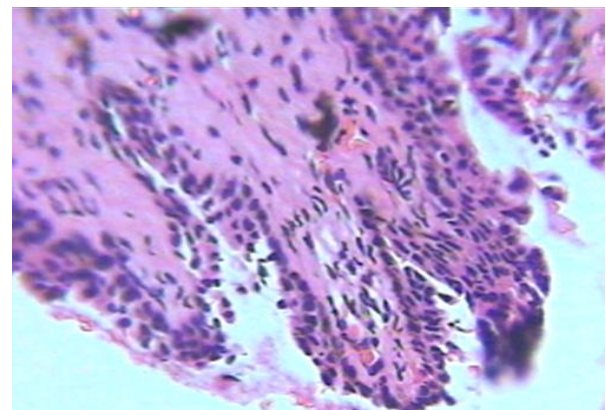


Figure 2: Photomicrograph of the Section of the Excisional Biopsy from the Patient (Haematoxylin & Eosin x400)

DISCUSSION

Advanced pterygium leading to bilateral blindness is uncommon and even unexpected in a setting with eye care resources. Hence, this report of a middle aged woman living in Ilorin, Nigeria illustrates the interplay of poverty and ignorance on pterygium progression leading to avoidable blindness and impact on source of livelihood and quality of life.

Pterygium does not necessarily regress in an eye with diminishing vision and similar case has been reported in an Australian aboriginal woman with a pterygium that covered the entire cornea, resulting in blindness (Taylor *et al.*, 1978). The history of pterygium in this patient's uncle may suggest inheritance with reduced penetrance though it may also be sporadic. Apparently, the protective role of her indoor occupation may be outweighed by genetic and environmental risk factors. There were a number of factors that clearly put the woman at risk of pterygium. She resides in Ilorin which is located on latitude 8° north of the equator (within the 'pterygium belt' of the world) (Johnson, 2003) and the town is dry, dusty and warm.

Although, surgical tariffs of the teaching hospital are subsidised, the patient evidently belongs to the low socio-economic class of the society as adjudged by her inability to afford pterygium excision in private eye care facility and the teaching hospital. This patient's pterygium excision was made possible through concession such as waving cost of surgery in one eye and sharing the MMC bought by 'have patient' who was in the same operation list. Adjunctive MMC complementing bare sclera pterygium excision in patients with pterygia is known to reduce recurrence rate (Ghoneim *et al.*, 2011). Nevertheless, timely intervention could have saved her sight with consequential impact on quality of life. This case therefore agrees with the differential billing proposed by Adeoye (2002) whereby the hospital bills of the 'haves' takes care of the 'have nots'. It is suggested that the private eye care facility should subsidise hospital bills for deserving indigent patients.

CONCLUSION

Pterygium is a cause of avoidable blindness and this present case is not isolated from what is seen in remote settings, nevertheless, it is amenable to simple excision with or without adjuvant therapy. Evidently, the attitudes, beliefs and practices of the eye care providers and the patients impact much on preventing blindness due pterygium.

CONFLICT OF INTEREST AND FUNDING

None of the authors have conflict of interest and the work is authors' self-sponsored.

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