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Research Article

Assessment of the Most Common Pterygium Symptoms and Risk Factors Leading to the Decision for its Surgical Removal-A long term study

Achyut N Pandey*

Department of Ophthalmology, VCSG Medical College and Research Institute, Srikot, Srinagar Garhwal, Uttarakhand, India

***Corresponding Author:** Achyut N Pandey, Department of Ophthalmology, VCSG Medical College and Research Institute, Srikot, Srinagar Garhwal, Uttarakhand, India.

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Abstract

Purpose: Pterygium is a benign growth of conjunctival tissue frequently related to chronic sunlight exposure and hot and dry climate. Purpose of this study was to prospectively analyze the most common pterygium symptoms and risk factors leading to the decision for surgical removal.

Methods: 40 patients (27 males, 13 females), mean age 48.75 years old (SD 8.5), with primary pterygium and no other eye disease participated in the study. The predominant symptoms caused by the pterygium were assessed using a questionnaire.

Results: The predominant symptoms associated with the pterygium were a feeling of discomfort or foreign body sensation in all 40 patients (100%), redness in 33 (82.5%), increased lacrimation in 17 (52.5%), aesthetic reasons in 22 (55%) and visual disturbance by means of astigmatism or extension of the pterygium to the optical axis in 8 (20%). The study showed a higher incidence of pterygium in the age group of 41 - 50 years with male preponderance probably due to chronic dryness, and exposure to ultraviolet light, dust, and hot winds. For younger patients, the predominant reason for choosing surgical removal was that the patients are not content with external appearance caused by pterygium and in contrast lacrimation was the predominant reason for the older. In most patients, visual disturbance was not a significant cause although astigmatism in eyes with pterygium was 3.51 D (SD 1.82) and 0.95 D (SD 0.78) in healthy eyes respectively.

Discussion: The main symptom in patients with pterygium is foreign body sensation, meanwhile aesthetic consideration and increased lacrimation are the main reasons leading to surgical removal decision for younger and older patients, respectively.

Keywords: *Pterygium; Pterygium Surgery; Astigmatism*

Introduction

Pterygium is a benign wing shaped fibrovascular conjunctival growth. While the body of the pterygium remains on the sclera, the head advances onto the cornea in many cases affecting vision, causing general discomfort, and becoming a cosmetic disturbance. Pterygium is a cause of diminution of vision when it encroaches on to the pupillary area. The patient also has cosmetic problem. Epidemiological Surveys indicate that the prevalence rates of pterygium vary depending on the exact population [1-6]. Overall prevalence rates range from 0.7 to 31% in various populations of the world [1-6]. As a general rule, prevalence rates for a pterygium increases with age although a decline in prevalence rates have been reported for patients over 60 to 70 years of age [1-3]. It typically develops in patients who have been living in hot climates and may represent a response to chronic dryness and exposure to ultraviolet light, dust and hot winds. It is rarely seen before the age of 20 years.

The main method of treating pterygium is surgical excision. Conservative treatment, involving the use of artificial tears or non-preserved lubricant eye ointment so as to provide comfort and relief from foreign body sensation, is symptomatic and temporary relief, and usually administrated in early stages of disease. Short term anti-inflammatory eye drops may also be useful for inflamed pterygia. The indications for surgical excision are conjunctiva invading or threatening visual axis, visual impairment due to astigmatism, recurrent inflammation, motility restriction, significant discomfort and cosmetic disfigurement. With the development of new methods of treatment, frequency and severity of pterygium has declined. The study was conducted to evaluate the most common pterygium symptoms and risk factors leading to the decision for surgical removal.

Aim

The aim of the study was to prospectively analyze the most common pterygium symptoms and risk factors leading to the decision for surgical removal.

Materials and Methods

Present study was the prospective, comparative case study involving 80 eyes of 40 patients who attended the tertiary eye care hospital in South India. The duration of the study was 2 years. The study was reviewed by the institutional review board. Each eligible patient provided informed consent prior to the enrolment in the study.

All cases of pterygium attending the OPD including recurrent pterygium has been included in this study.

A detailed history was taken and recorded regarding the disease with reference to age, occupation, residence, exposure to dust and hot wind. The extent of corneal involvement by the pterygium was noted. The predominant symptoms caused by the pterygium were assessed using a questionnaire.

Results

The present study was conducted at the tertiary eye care hospital over a period of 23 months (October 2015 to September 2016). 80 eyes of 40 patients were enrolled in this study.

Out of the 80 patients maximum number of patients were in the age group from 41 to 50 years in which the youngest patient was 23 years of age and the oldest patient was 70 years of age with male preponderance in this study comprising 27 males (67.5%) as compared to 13 females (32.5%) (Table 1). The higher incidence in males could be attributed to their greater exposure to hot, dry and dusty climate. Involvement of right eye observed in 24 patients (60%) while left eye was involved in 16 patients (40%).

No of patients	No of eyes	Percentage
Male	27	67.5
Female	13	32.5

Table 1: *Demography in the study.*

The cornea was encroached by pterygium between 2 - 3mm in 77 eyes (96.70%) while the cornea was involved greater than 3mm by pterygium in 3 eyes (3.30%) (Table 2).

Size	No of eyes	Percentage
2-3 mm	88	96.70
Greater than 3 mm	3	3.30

Table 2: *Shows the size of Pterygium.*

The predominant symptoms associated with the pterygium were a feeling of discomfort or foreign body sensation in all 40 patients (100%), redness in 33 (82.5%), increased lacrimation in 22 (55%), aesthetic reasons in 17 (52.5%) and visual disturbance by means of astigmatism or extension of the pterygium to the optical axis in 8 (20%) (Figure 1). For younger patients, the predominant reason for choosing surgical removal was that the patients are not content with external appearance caused by pterygium and in contrast lacrimation was the predominant reason for the older. In most patients, visual disturbance was not a significant cause although astigmatism in eyes with pterygium was 3.51 D (SD 1.82) and 0.95 D (SD 0.78) in healthy eyes respectively.

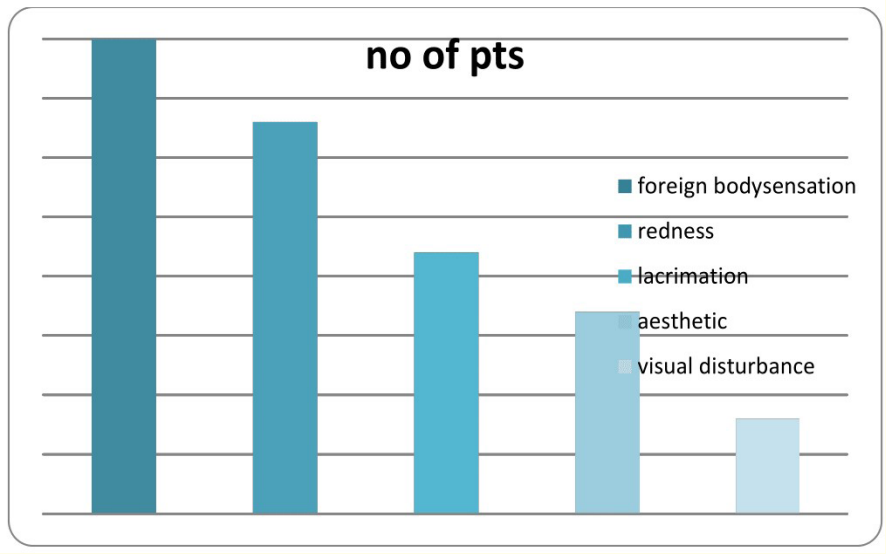

Figure 1: *Predominant symptoms associated with the pterygium.*

Discussion

According to various studies, pterygium leads to a considerable effect on corneal refractive status which has been previously measured by refraction [7,8], keratometry [7] and corneal topography [8-13]. However, in the present study, the predominant symptom in patients with pterygium was the foreign body sensation, while aesthetic reasons in younger and increased lacrimation in older patients led to the decision for its surgical removal. In most patients who participated, visual disturbance was not a significant cause of disturbance, although astigmatism in eyes with pterygium was significantly higher compared to healthy eyes. The results of our study show that the main symptom in patients with pterygium is foreign body sensation rather than visual disturbance. Meanwhile, aesthetic consideration was the main reason leading to surgical removal decision for younger patients.

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