

A hospital based study of risk factors associated with pterygium

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Abstract

Introduction: Pterygium is usually presents as wing or triangular in shape. It not only affects the cosmetic look of the patient, but also affects vision by affecting the refractive astigmatism. Thus it has a potentially blinding effect in the advanced stage due to invasion of the visual axis, which can have a significant impact on vision, and may require surgery for visual rehabilitation. **Aims and Objectives:** To study the various risk factors associated with pterygium among the patients admitted in ophthalmology department. **Materials and Method:** The present cross sectional study was conducted in the department of ophthalmology of Dr Ulhas Patil Medical College, Jalgaon. For the purpose of study all the patients admitted in the ophthalmology inpatients department in the year 2014 were included in the study. The detail information of each case was entered in a prestructured proforma, which includes age, sex, occupation and presenting complaints. Details ocular, medical and surgical history was recorded. Detail findings of ocular examination were also recorded. History of associated risk factors was also recorded. All the cases were managed by excision of pterygium by using standard protocol. All the cases were followed up till they were discharged and the duration of hospital stay and outcome of the surgery was recorded. **Results:** Out of total 1441 patients 17 were suffering from pterygium. Thus the prevalence of pterygium among the inpatient of ophthalmology was 1.78%. The mean age of patients presenting with pterygium was 49.71± 12.74 years. The patients were in the age group of 28 years to 73 years. Among the total 17 cases 70.59% were male. Pterygium was unilateral in 76.47% patients. It was seen that majority of the patients were residing in rural area (58.82%) and 64.71% were involved in outdoor occupation. **Conclusion:** The prevalence of pterygium was 1.78%. Increasing age, male sex, rural residence and outdoor occupation which indirectly increase the UV radiation exposure were the risk factors associated with pterygium.

Keywords: pterygium, risk factors, prevalence.

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INTRODUCTION

Pterygium is a common disorder of ocular surface in many parts of the world, affecting one eye or both eye^{1,2}. A pterygium is an elevated, superficial, external ocular mass that usually forms over the perilimbal conjunctiva and extends onto the corneal surface. Pterygium can vary from small, atrophic quiescent lesions to large, aggressive, rapidly growing fibrovascular lesions that can

distort the corneal topography, and, in advanced cases, they can obscure the optical center of the cornea.^{1, 3} Pterygium is usually presents as wing or triangular in shape. It not only affects the cosmetic look of the patient, but also affects vision by affecting the refractive astigmatism. Thus it has a potentially blinding effect in the advanced stage due to invasion of the visual axis, which can have a significant impact on vision, and may require surgery for visual rehabilitation⁴. A variety of complaints has been observed in patients with pterygium, ranging from no symptoms to significant redness, swelling, itching, irritation, and blurring of vision associated with elevated lesions of the conjunctiva and contiguous cornea in one or both eyes. The exact etiology of pterygium remains uncertain; however, several risk factors have been proposed. Previous studies have suggested that geographical latitude, rural residency, older age, race, gender, outdoor activity, and low educational levels were associated with greater risk for pterygium^{5,6,7}. Thus in the present study we tried to study

the prevalence of pterygium of among the patients admitted in the ophthalmology department and also study the risk factors associated with pterygium.

MATERIALS AND METHOD

The present cross sectional study was conducted in the department of ophthalmology of Dr Ulhas Patil Medical College, Jalgaon. For the purpose of study all the patients admitted in the ophthalmology inpatients department in the year 2014 were included in the study. The detail information of each case was entered in a prestructured proforma, which includes age, sex, occupation and presenting complaints. Details ocular, medical and surgical history was recorded. Detail findings of ocular examination were also recorded. History of associated risk factors was also recorded. All the cases were managed by excision of pterygium by using standard protocol. All the cases were followed up till they were discharged and the duration of hospital stay and outcome of the surgery was recorded.

RESULTS

Table 1: Prevalence of pterygium among the study patients

Total patients	1441
Patients suffering from Pterygium	17
Prevalence of pterygium	1.78%

It was observed there were total 1441 admission in the ophthalmology department in the year 2014. Out of total 1441 patients 17 were suffering from pterygium. Thus the prevalence of pterygium among the inpatient of ophthalmology was 1.78%.

Table 2: Distribution of patients according to risk factors

Risk factors	No. of patients	%
Age	49.71± 12.74	
Sex	Male	12 70.59
	Female	5 29.41
No. of eyes affected	Unilateral	13 76.47
	Bilateral	04 23.53
Residence	Urban	07 41.18
	Rural	10 58.82
Occupation	Outdoor	11 64.71
	Indoor	06 35.29

It was seen that the mean age of patients presenting with pterygium was 49.71± 12.74 years. The patients were in the age group of 28 years to 73 years. Among the total 17 cases 70.59% were male. Pterygium was unilateral in 76.47% patients. It was seen that majority of the patients were residing in rural area (58.82%) and 64.71% were involved in outdoor occupation.

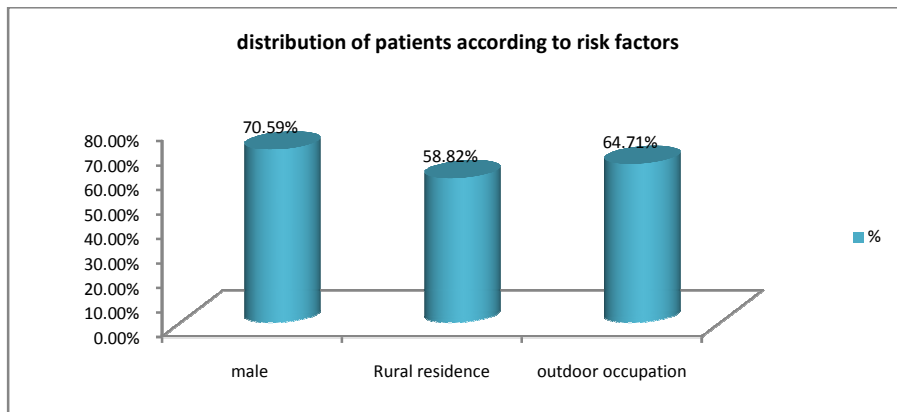


Figure 1: Distribution of patients according to risk factors

DISCUSSION

The present study was conducted in the department of ophthalmology of Dr Ulhas Patil Medical College, Jalgaon with objective to study the epidemiology of pterygium in the IPD patients. There were total 1441 admission in the ophthalmology department them 17 patients were suffering from pterygium. Thus the prevalence of pterygium among the inpatient of ophthalmology was 1.78%. Wide variation has been observed in the prevalence of pterygium worldwide. The prevalence of pterygium, in India, ranges from as low as 0.75% to as high as 10.42% in different states, and an

overall average in prevalence being 5.2%, according to studies conducted by PGIME, Chandigarh, India. A study from Wardha by MM Singh *et al*⁸, observed prevalence of pterygium in people aged 50 and older of 5.2%. In a survey in New South Wales, Australia, reported 9.6% prevalence⁹. But Moran *et al*¹⁰ in 1984 reported the prevalence of pterygium was only 0.3%. Panchapakesan¹¹ reported the prevalence of 7.4% in their study. It was seen that the mean age of patients presenting with pterygium was 49.71± 12.74 years. The patients were in the age group of 28 years to 73 years and the prevalence was increasing with age. McCarty CA¹², Lu P *et al*¹³ and Lu J

*et al*¹⁴ also reported that the prevalence of pterygium was increasing with the increasing age in their studies. Among the total 17 cases 70.59% were male. Similar findings were also reported by the Blue Mountains Eye study¹⁰ and the Tanjong Pagar survey¹⁵. It was seen that majority of the patients (58.82%) were residing in rural area and 64.71% were involved in outdoor occupation. Various studies had reported higher prevalence in the patients involved in outdoor activities.^{16,17,18} More outdoor activity makes it get more exposure to sunlight. A strong positive correlation has been proved between climatic UV radiation and the prevalence of pterygium¹⁹. Many ophthalmologists reported that pterygium is a consequence of ultraviolet- induced damage with subsequent elastoid degeneration of the subepithelial connective tissue^{19,20}. Many studies have proved that spending longer periods of time outdoors has led to an increased risk of pterygium, with cumulative exposure to ultraviolet (UV) radiation playing a significant role; it is therefore strongly related to ocular sun exposure^{21,22}. Thus more outdoor occupation increases more exposure to UV radiation thus indirectly increases the risk of pterygium.

CONCLUSION

Thus from the above results and discussion we conclude that the prevalence of pterygium was 1.78%. Increasing age, male sex, rural residence and outdoor occupation which indirectly increase the UV radiation exposure were the risk factors associated with pterygium.

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