

A Study of efficacy of conjunctival autografting for the management of pterygia at tertiary health care center

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Abstract

Background: Pterygium word comes from the greek word 'pterygos` meaning "wing of an insect" which was described by Hippocrates, Callen and others. **Aims and Objectives:** To Study efficacy of conjunctival autografting for the management of pterygia at tertiary health care center **Methodology:** This was cross-sectional study was carried out in the Department of Ophthalmology, Government Medical college and Hospital, Latur during August 2015 to February 2017. Total 37 eyes of 35 patients underwent pterygium excision with conjunctival autografting. Out of 37 pterygia, 35 were primary and 2 were recurrent pterygia. Patients attending the outpatient Department of Ophthalmology were selected. **Result:** In our study we have seen that 73% of the patients belonging to the age group of 30-50 yrs., which is youngest age and the pterygial tissue is fleshy and vascular 5.71% of patients from extreme age group and 8.57% from the very young age. The majority of the patients were Female i.e. 60% and Males were 40% 94.59% of the patients were having Primary and 5.41% were having recurrent pterygia majority of the patients were having Progressive pterygium i.e. 81.08%, where recurrence rate was more, where as 16.21 % were having stationary, while 2.70% were having atrophic Preoperative unaided visual acuity was compared with 3 month postoperative visual acuity on Snellen's chart. Visual acuity was either improved or unchanged in 94.5% (81% of patient Showing improved, 13.5% showing unchanged) and 5.5 % deterioration. The deterioration was not due to surgery as complication, but due to senile cataract. Not a single case of recurrence was found in primary pterygium group, while on case out of 2, with recurrence from recurrent pterygium group. **Conclusion:** It can be concluded from our study that conjunctival autografting for the management of pterygia was effective with respect to improved visual acuity and no recurrence in primary cases. **Key Words:** Pterygium, Conjunctival autografting, visual acuity.

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INTRODUCTION

Pterygium word comes from the greek word 'pterygos` meaning "wing of an insect" which was described by Hippocrates, Callen and others. It is a wing shaped fibrovascular tissue proliferation from the conjunctiva on to the cornea. Pterygium is a worldwide condition

commonly seen in the Cameron belt located between 37° north and south of the equator¹. Different theories regarding pathogenesis include U-V light exposure, chronic inflammation, and dry eye. There is abnormal expression of p53 tumour suppressor gene in the conjunctiva of patients with Pterygium which suggests that Pterygium is a growth disorder rather than a degeneration². The mutation of p53 gene is located on chromosome 17^{2,3}. Etiological factors include hypersensitivity which is generally Type 1 reaction due to presence of IgG and IgE, dietary deficiencies like choline and raised blood cholesterol, exposure to Ultra Violet type B radiations, infections and inflammations. Thus persons having an outdoor occupation like farming have higher chance of development of pterygium⁴. Heredity is considered as an important etiological factor for pterygium development. Autosomal dominant inheritance is associated with pterygium development. Environmental

factors like exposure to sunlight, heat, dry climate, wind, dust are considered important etiological factors for development of pterygium. Adjunctive factors for development of pterygium are decreased secretion from lacrimal glands, tear film abnormality and some immune mechanisms⁵. We here studied the outcome of conjunctival autografting for the management of pterygium

MATERIAL AND METHODS

This was cross-sectional study was carried out in the Department of Ophthalmology, Government Medical college and Hospital, Latur during August 2015 to February 2017. Total 37 eyes of 35 patients underwent pterygium excision with conjunctival autografting. Out of 37 pterygia, 35 were primary and 2 were recurrent pterygia. Patients attending the outpatient Department, Ophthalmology were selected. Detailed history and ocular examination was done in all 35 patients. Possibility of pseudopterygium was ruled out by careful examination. Systemic investigations and local investigations were carried out for operative fitness. All the patients were admitted in the ward one day prior to surgery and discharged on 3rd post operative day. All the 35 patients were operated by single surgeon and the surgical technique and was similar to that described by Kenyon *et al.* Postoperative management was similar to all the 35 patients. A adequate post-operative care was taken follow up was done at 7th, 15th, day, monthly for 3 months and there after at 3rd, 6th, 9th, 12th month and 18th month. During the follow up the outcome of patients was seen.

RESULT

Table 1: Distribution of the patients as per the age

Age (Yrs.)	No.	Percentage (%)
21-30	03	8.57
31-40	11	31.42
41-50	15	42.85
51-60	04	11.42
61-70	02	5.71
Total	35	100

The above table shows that 73% of the patients belonging to the age group of 30-50 yrs., which is youngest age and the pterygial tissue is fleshy and vascular 5.71% of patients from extreme age group and 8.57% from the very young age.

Table 2: Distribution of the patients as per the sex

Sex	No.	Percentage (%)
Male	14	40%
Female	21	60%
Total	35	100%

The majority of the patients were Female i.e. 60% and Males were 40%

Table 3: Distribution of the patients as per type of pterygium

Type	No. of Eyes	Percentage (%)
Primary	35	94.59%
Recurrent	02	05.41%
Total	37	100%

94.59% of the patients were having Primary and 5.41% were having recurrent pterygia

Table 4: Distribution of the patients as per the clinical type of pterygium

Clinical type	No. of Eyes	Percentage
Progressive	30	81.08
Stationary	06	16.20
Atrophic	01	02.70

The majority of the patients were having Progressive pterygium i.e. 81.08%, where recurrence rate was more, where as 16.21 % were having stationary, while 2.70% were having atrophic

Table 5: Distribution of the patients as per the postoperative visual acuity

Postoperative vision	No. of patients	Percentage (%)
Improved	30	81.00
Unaltered	05	13.51
Deteriorated	02	05.49

Preoperative unaided visual acuity was compared with 3 month postoperative visual acuity on Snellen’s chart. Visual acuity was either improved or unchanged in 94.5% (81% of patient Showing improved, 13.5% showing unchanged) and 5.5 % deterioration. The deterioration was not due to surgery as complication, but due to senile cataract.

Table 6: Status of patients prior to surgery Vs status after surgery i.e. Recurrence as per type of pterygium

Status	No. of Eyes	Recurrence	Percentage
Primary	35	00	00
Recurrent	02	01	50

Not a single case of recurrence was found in primary pterygium group, while one case out of 2, with recurrence from recurrent pterygium group.

DISCUSSION

Pterygium has been known as a triangular sheet of fibro-vascular tissue that appears on the epibulbar conjunctiva and cornea.⁶ It is more prevalent in adults after 20 years of age while its occurrence in children is rare.⁷ In all age group treatment of choice remains the surgical excision. The most common indications for surgery are persistent discomfort, chronic irritation, recurrent inflammation, visual distortion, irregular astigmatism, restricted ocular motility, and cosmesis.⁸ Out of all techniques conjunctival autografting is the best available option after pterygium excision to prevent recurrence.^{9,10,11,12,13} In our study we have seen that 73% of the patients belonging to

the age group of 30-50 yrs., which is youngest age and the pterygial tissue is fleshy and vascular 5.71% of patients from extreme age group and 8.57% from the very young age. The majority of the patients were Female i.e. 60% and Males were 40% 94.59% of the patients were having Primary pterygia and 5.41% were having recurrent pterygia, majority of the patients were having Progressive pterygium i.e. 81.08%, where recurrence rate was more, where as 16.21 % were having stationary, while 2.70% were having atrophic Preoperative unaided visual acuity was compared with 3 month postoperative visual acuity on Snellen's chart. Visual acuity was either improved or unchanged in 94.5% (81% of patient Showing improved, 13.5% showing unchanged) and 5.5 % deterioration. The deterioration was not due to surgery as complication, but due to senile cataract. Not a single case of recurrence was found in primary pterygium group, while one case out of 2, with recurrence from recurrent pterygium group. These findings are similar to Mrunal Suresh Pati⁵ they found There is significant improvement in Post operative Best Corrected Visual Acuity (BCVA) compared to preoperative BCVA with difference of 0.17 +0.02. Postoperatively out of 100 eyes, 4 recurrences occurred with recurrence rate of 4%.

CONCLUSION

It can be concluded from our study that conjunctival autografting for the management of pterygia was effective with respect to improved visual acuity and no recurrence in primary cases.

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