

# A Study of various complications of conjunctival autografting for the management of pterygia at tertiary health care centre

Gosavi Vivek Suresh<sup>1</sup>, Shelke Eknath Biroba<sup>2\*</sup>

<sup>1</sup>Assistant Professor, Department of Ophthalmology, Government Medical College, Latur, Maharashtra, INDIA.

<sup>2</sup>Assistant Professor, Department of Ophthalmology, SRTR Medical College and Hospital Ambajogai, Maharashtra, INDIA.

Email: [drgosavieyes@rediffmail.com](mailto:drgosavieyes@rediffmail.com)

## Abstract

**Background:** Proprioception from the ocular surface is not normally perceived, firstly because of lack of proprioceptors and secondly due to the smooth and regular surface pattern. **Aims and Objectives:** To Study various complications of conjunctival autografting for the management of pterygia. **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. **Result:** 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%. All the patients were having congestion, which reduced after inflammation is subsided. 21.62% of patients showing chemosis, which responded well to topical steroids. No need to treat subconjunctival hemorrhage, which was seen in 5.4% of cases. 5.4% showing wound dehiscence, which was sutured in second sitting. No other major complications noted. Not a single case of recurrence was found in primary pterygium group, while one case out of 2, with recurrence from recurrent pterygium group. **Conclusion:** It can be concluded from our study that most common complication were congestion, chemosis, subconjunctival hemorrhage, wound dehiscence, No other major complications noted. **Key Words:** Conjunctival autografting, pterygium, subconjunctival hemorrhage.

## \* Address for Correspondence:

Dr. Shelke Eknath Biroba, Assistant Professor, Department of Ophthalmology, Government Medical College, Latur, Maharashtra, INDIA.

Email: [drgosavieyes@rediffmail.com](mailto:drgosavieyes@rediffmail.com)

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## INTRODUCTION

Proprioception from the ocular surface is not normally perceived, firstly because of lack of proprioceptors and secondly due to the smooth and regular surface pattern. Blinking reflex helps in the lubrication of the ocular surface with precorneal tear film. Therefore any irregularities that alter the corneo-conjunctival surface

produce foreign body sensation. The exact pathophysiology of primary pterygium remains elusive in spite of its characteristic clinical appearance and florid recurrence after simple excision. It is proposed that normally the limbal stem cells provide anatomical and physiological barrier to the growth of conjunctival blood vessels over the cornea. Hence, local or diffuse limbal stem cell deficiency is probably the accepted hypothesis for primary pterygium evolution. Simple excision by 'bare sclera' technique alone resulted in increased incidence rates of recurrent pterygium.<sup>1</sup> Meta-analytical study following bare sclera method revealed, a six fold increase in recurrence if no conjunctival grafting was performed and twenty-five times higher incidence was reported without intraoperative/postoperative mitomycin-C use.<sup>2</sup> Although mitomycin-C proved to be an excellent adjuvant in terms of decreasing the incidence of recurrent pterygium, unfortunately caused ocular surface problems

namely dry eye, persistent photophobia and chronic irritation. Bare sclera technique without the use of adjuvant carried a high risk of pterygium recurrences and sight threatening complications, commonly surgically induced necrotizing scleritis.<sup>3</sup> Conjunctival autografting yielded acceptable limits of recurrences with no reports of long term vision threatening complications.<sup>4-7</sup> Limbal conjunctiva contains stem cells demarcated externally by palisade of Vogt's that normally visualized as longitudinal wavy brownish striations running perpendicular to the corneal surface at the superior and inferior llimbus.<sup>8</sup>

### MATERIAL AND METHODS

This was cross-sectional study 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. 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 3<sup>rd</sup> 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 7<sup>th</sup>, 15<sup>th</sup>, day, monthly for 3 months and thereafter at 3<sup>rd</sup>, 6<sup>th</sup>, 9<sup>th</sup>, 12<sup>th</sup> month and 18<sup>th</sup> month. During the follow up the various complications of the surgery in the 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           |
| <b>Total</b> | <b>35</b> | <b>100</b>     |

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%            |
| <b>Total</b> | <b>35</b> | <b>100%</b>    |

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

**Table 3:** Distribution of the patients as per the various complications

| Complications              | No. | Percentage (%) |
|----------------------------|-----|----------------|
| Congestion                 | 37  | 100            |
| Chemosis                   | 08  | 21.62          |
| Subconjunctival hemorrhage | 02  | 5.40           |
| Wound dehiscence           | 02  | 5.40           |
| Graft necrosis             | 00  | 00             |
| Conjunctival cyst          | 00  | 00             |
| Tenon's granuloma          | 00  | 00             |

All the patients were having congestion, which reduced after inflammation is subsided. 21.62% of patients showing chemosis, which responded well to topical steroids. No need to treat subconjunctival hemorrhage, which was seen in 5.4% of cases. 5.4% showing wound dehiscence, which was sutured in second sitting. No other major complications noted.

**Table 4:** 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

The surgical management of pterygium is often complicated by the development of fibrovascular tissue, known as a 'recurrent pterygium'. This tends to be more aggressive in its growth pattern than the original lesion. Rates of recurrence in previously unoperated cases treated by simple surgical excision range from 32% to 89%<sup>9,10,11,12</sup>. More recently conjunctival autografting has been advocated as an effective method of reducing rates of recurrence.<sup>11</sup> Bruce D S Allan found the Complications (wound dehiscence, three cases; Tenon's granuloma one case; conjunctival cyst, one case) were all corrected by minor surgical revision without sequelae<sup>13</sup>. In our study we have seen 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%. All the patients were having congestion, which reduced after inflammation is

subsided. 21.62% of patients showing chemosis, which responded well to topical steroids. No need to treat subconjunctival hemorrhage, which was seen in 5.4% of cases. 5.4% showing wound dehiscence, which was sutured in second sitting. No other major complications noted. Not a single case of recurrence was found in primary pterygium group, while one case out of 2, with recurrence from recurrent pterygium group.

## CONCLUSION

It can be concluded from our study that most common complication were congestion, chemosis, subconjunctival hemorrhage, wound dehiscence, No other major complications noted

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