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Research Article

The Effectiveness of Conjunctival Autograft in Surgery

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Abstract

Purpose: To demonstrate the effectiveness and results of conjunctival autograft in pterygium surgery.

Methods: 44 patients operated for pterygium surgery with conjunctival autograft with 18 months and less follow -up were registered. 20 of patients had bilateral primary pterygium. 11 of patients had recurrent pterygium. 13 of patients had primary unilateral pterygium. Graft margins were secured to the recipient site.

Results: The follow up period was 18 months and less. The median of age in the group was 42.6 years old. In 17 cases was performed using absorbable sutures (vicryl 10/0), in 15 patients was performed using 10/0 neilon (non- absorbable sutures) and in 12 patients 9.0 vicryl sutures. There were no significant differences between women and men with respect to recurrence. All the patients demonstrate no recurrence rate between primary and recurrent pterygium.

Conclusion: After 18 months follow-up period after autograft pterygium surgery the visual quality was improved in 25 patients and without changes in 19. Conjunctival autograft surgery appears to be an effective surgical technique in preventing pterygium recurrence and it can also help in improving the best corrected visual acuity.

Keywords: *Pterygium Surgery; Conjunctival Autograft; Pterygium Recurrence*

Introduction

Pterygium - is a slow growing, proliferation of subconjunctival fibrovascular tissue. The prevalence of pterygium varies from 1.2 up to 32%. The main etiopathogenetic factor is the induced damaged to the limbal stem-cells by more aggressive action of ultraviolet solar rays. According to the grading system (T1 to T3) by Tan for primary pterygium there are 3 grade: atrophic, intermedia, fleshy. The factors predisposing to recurrence are insufficient removal of affected Tenon tissue, exposed sclero-corneal limbus with not covered conjunctival and poorly controlled inflammatory reaction.

For the symptomatic pterygium the main treatment is surgical. The most used surgical methods are: sclera excision, excision with conjunctival transposition, excision with adjunctive medical therapy and ocular surface transplantation (CAU, CLAU, AMG).

Purpose of the Study

To demonstrate the effectiveness and results of conjunctival autograft in pterygium surgery. CAU- is considered gold standard in pterygium surgery (5 - 8% of recurrence), autologous free conjunctival graft obtained from superior or superior-temporal bulbar conjunctival. Essential factors for successful conjunctival autografting are: the adequate removal of all surrounding fibrovascular tissue,

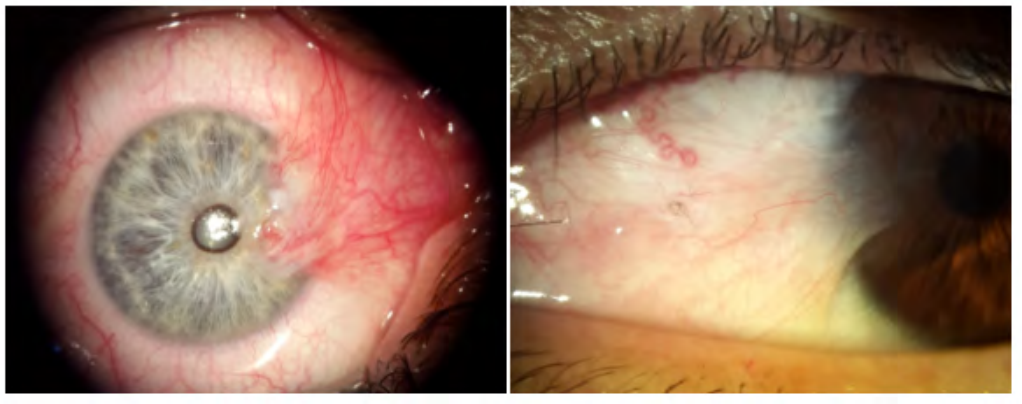

Figure 1: *a- Primary pterygium, b- Recurrent pterygium.*

obtaining Tenons free graft, complete cleaning of corneoscleral limbus, smoothening of the treated surface, the minimal manipulation of tissues and the conjunctival autograft need to cover the entire area without tension areas and carid for it to be well aligned at the limbus.

Methods

44 patients operated for pterygium surgery with conjunctival autograft with 18 months and less follow-up were registered. The median of age in the group was 42.6 years old. 20 of patients had bilateral primary pterygium, 11 of patients had recurrent pterygium. 13 of patients had primary unilateral pterygium. Mean BCVA (Snellen) was 0.62M astigmatism 3.42 Km power 43.81 preoperatively.

Anaesthesia: peribulbar, subconjunctival, topical. Conjunctival autograft harvested from the superior site, tendon free dissection, cautery was avoid from the graft. 10/0 vicryl, 10/0 neilon and 9/0 vicryl sutures were replaced in pterygium surgery. Topical steroids for 4 weeks, topical antibiotics for 1 week and tear substitutes were used postoperatively.

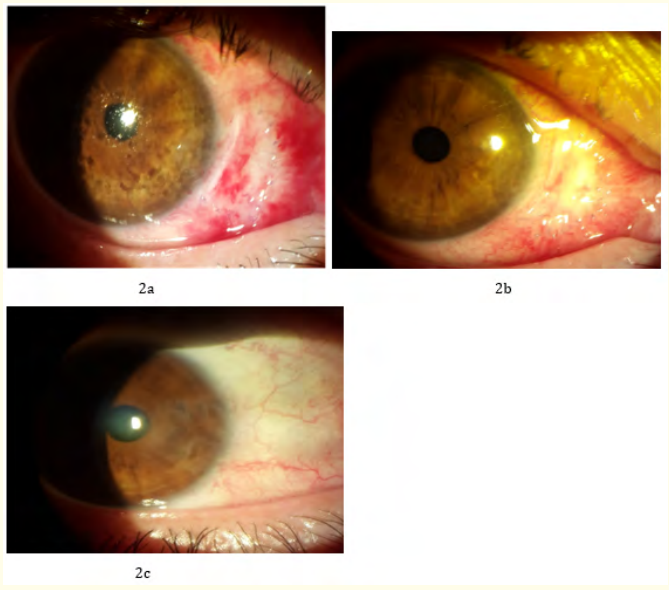

Figure 2: *a- 1 day post operation, b- 1 week post operation, c- 4 weeks post operation.*

Results, Discussion and Conclusion

The follow up period was 18 months and less. In 17 cases was performed using absorbable sutures (vicryl 10/0), in 15 patients was performed using 10/0 neilon (non-absorbable sutures) and in 12 patients 9.0 vicryl sutures. There were no significant differences between women and men with respect to recurrence. All the patients demonstrate no recurrence rate between primary and recurrent pterygium, and between sutures vicryl 10.0, vicryl 9.0 and neilon 10.0. After 18 months follow-up period after autograft pterygium surgery, there were no statistically significant differences in recurrence rates for the application of sutures 10.0 neilon, 10.0 vicryl or 9.0 vicryl. There were no statistically significant differences between the use of autograft in primary and recurrent pterygium. The visual quality was improved (mean BCVA) after pterygium surgery in 25 patients and without changes in 19 patients. Conjunctival autograft surgery appears to be an effective surgical technique in preventing pterygium recurrence and it can also help in improving the best corrected visual acuity [1-5].

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