

# Conjunctival Pedunculated Flap for Primary and Recurrent Pterygium: Recurrence rate and Complications

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**Objectives:** The aim of this study is to evaluate the surgical outcome of conjunctival pedunculated flap for treatment of primary and recurrent pterygia.

**Methods:** A retrospective study of 66 eyes of 59 patients with primary pterygia (50 eyes) and recurrent pterygia (16 eyes) who underwent pterygium excision with conjunctival pedunculated flap in Princess Haya Hospital (PHH) in southern Jordan. The surgical outcome was determined by the recurrence rate and surgical complications.

**Results:** After a median follow up time of 7.8 months (range 5 to 14 months), the overall recurrence rate was 9% (6 out of 66 eyes). In primary pterygia the recurrence rate was 6% (3 out of 50 eyes), while in recurrent pterygia 19% (3 out of 16 eyes). The complications encountered in this study were all minor without any sight threatening complication.

**Conclusion:** Pterygium excision with conjunctival pedunculated flap is a simple and safe method with low recurrence rate.

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A pterygium is wing-shaped fibrovascular connective tissue overgrowth encroaching on the cornea from conjunctiva in the interpalpebral fissure<sup>1</sup>. Pterygium develops as a result of irritation of the conjunctiva in the exposed horizontal meridian<sup>1</sup>. It is more prevalent in hot, dry and dusty climates with high levels of ultraviolet light<sup>2</sup>. Because of the high recurrence rate (40-90%) after simple excision, and risk of complications associated with adjunctive chemotherapy, we have decided to adopt other surgical methods such as free and pedunculated conjunctival flaps in treatment of primary and recurrent pterygia in Princess Haya Hospital in Southern Jordan, it is an area, where most people work outdoors in hot and dry climates with high surface reflectance of ultraviolet light. In this study we present our results in 66 eyes (59 patients) with primary and recurrent pterygia treated with conjunctival pedunculated flap.

## METHODS

Pterygium excision with conjunctival pedunculated flap has been performed in 66 eyes of 59 patients ranging in age from 27 to 57 years (median 37.5). Primary pterygia were treated in 50 eyes (45 patients). The average age in primary pterygia was 35.3 years (range 27 to 57) and the median follow up time was 7.9 months (range 5 to 14 months). Recurrent pterygia were treated in 16 eyes (14 patients). The average age was 42 years (range 35-47) and the median follow up time was 7.5 months (range 5 to 10 months).

We have performed the surgery in the outpatient according to the surgical techniques described by Gao Lei<sup>4</sup> with some

modifications; (1) A speculum is inserted (2) Sub conjunctival anesthesia (1% lignocaine) administered via 27 gauge needle beneath the pterygium (3) Lifting up the pterygium with toothed forceps and shaving the apex of the pterygium from the cornea with a disposable knife No. 15 blade, including a thin layer of cornea, in order to remove all degenerative corneal tissue and leave a smooth surface (4) Removal of the subepithelial tissue from the undersurface of the conjunctival epithelium back to the plica semilunaris (5) Excision of the head, neck and about 3 mm from the body of the pterygium leaving an exposed area of sclera about 5 mm wide (6) A thorough polishing with the blade on the cornea and sclera to remove all pathological tissue (7) Sub conjunctival injection of 1% lignocaine was given in the upper bulbar conjunctiva (8) A conjunctival pedunculated flap without tenon's capsule was created from adjacent conjunctiva and was slid down over bare sclera (9) Suturing of the flap with 6-0 or 7-0 vicryl with interrupted sutures after leaving of about 2 mm of bare sclera adjacent to the corneoscleral limbus (Figure 1 and 2). Postoperative antibiotics with mild corticosteroids was given topically for

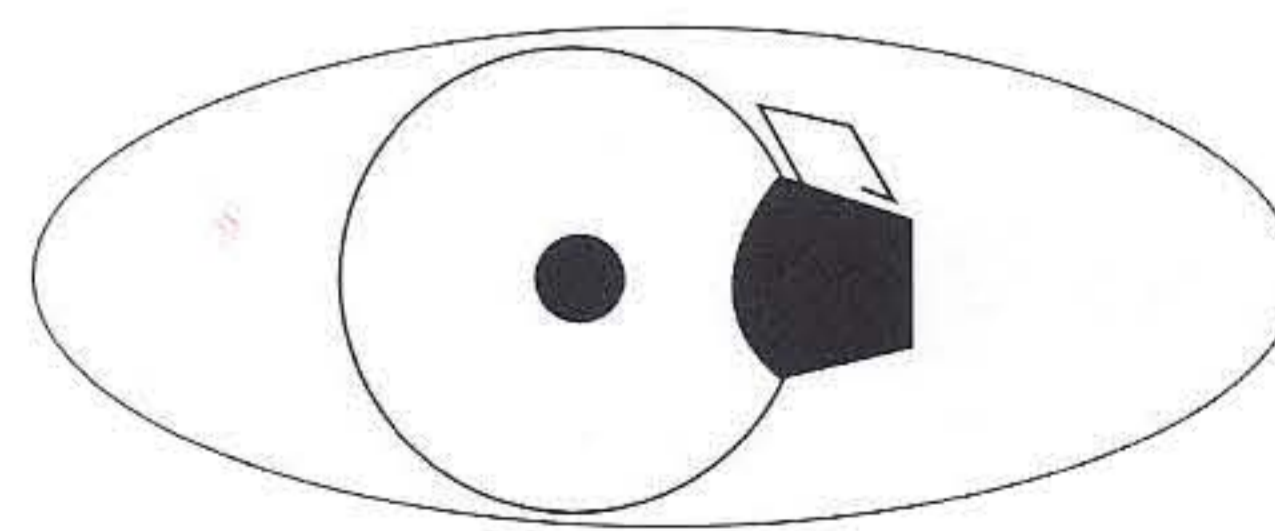


Figure 1: Creation of the conjunctival flap after excision of the pterygium

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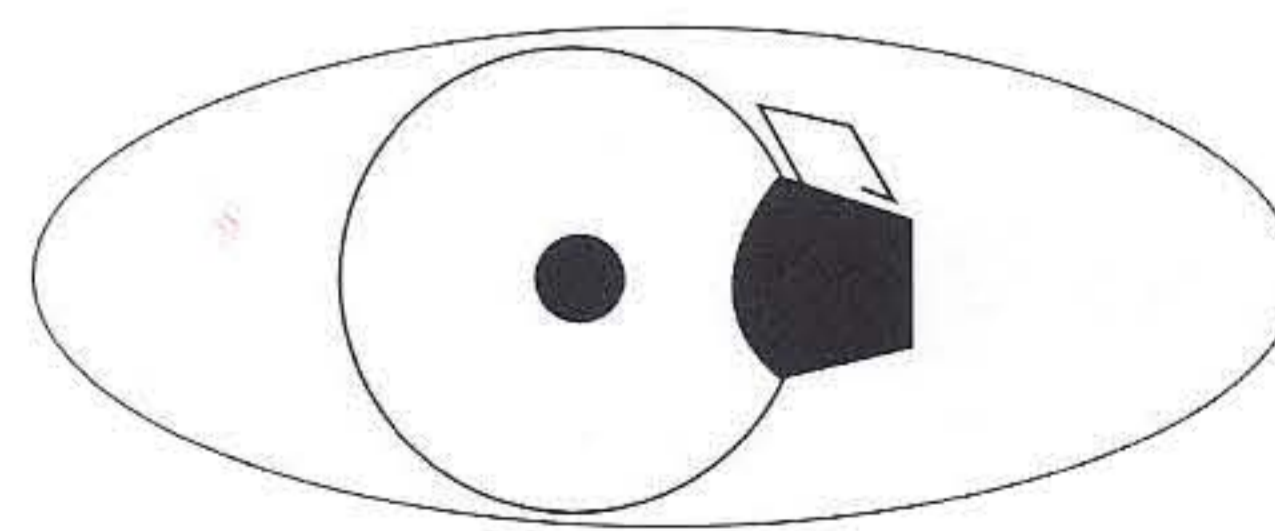


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