

Co-Management Update March 2024:

Evolution of Excellence in the Treatment of Pterygium From Scalpel, to Amniotic Membranes, to Eye Drops?

1.0 Hour COPE Credit

Kent L. Wellish, M.D.

Course Description: This Course reviews for the primary eye care practitioner Advanced Concepts in the latest breakthroughs in Pterygium Treatments, including a revolutionary new treatment in FDA Clinical Trials utilizing eyedrops instead of surgery.

Course Learning Objectives:

- Describe the definition of pterygium.
 - Describe the etiology of pterygium.
 - Review the epidemiology of pterygium.
 - Review the Pathophysiology of Pterygium
 - Review the Evolution of Treatments throughout history
 - Summarize the clinical features of pterygium.
 - Outline the differential diagnoses of pterygium.
 - Explain the role of interprofessional collaboration to improve the outcomes of patients with pterygium.
 - Review the Pre-operative Evaluation, Current “best in class” Surgical Treatments, and Post-operative Care for current FDA Approved Pterygium Procedures
 - Review the Inclusion and Exclusion Criteria for the Pterygium Eye Drop Protocol Currently in Progress
 - Case Study Reviews
 - Provide an opportunity for Questions and Answers
1. Definition of Pterygium.
 2. Etiology of Pterygium.
 3. Epidemiology of Pterygium.
 4. Pathophysiology of Primary Pterygium
 5. Pathophysiology of Recurrent Pterygium
 6. Histopathology of Pterygium.

 7. History and Examination of Patients with Pterygium
 8. Evaluation of Patients with Pterygium
 9. Differential Diagnosis of Pterygium.

10. Evolution of Treatments throughout history.
11. Current Treatment / Management of Pterygium
12. Common Surgical Treatments Currently Used

- A. **Conjunctival Autograft**
- B. **Limbal Conjunctival Autotransplant (LCAT)**
- C. **Limbal Stem Cells Transplantation**

1. This procedure seems likely to enable the epithelialization of the peripheral cornea, the limbus, and also the neighboring denuded sclera by the corneal epithelium.
2. The limbal region can then benefit from circumferential migration of limbal cells.
3. Limbal stem cells are not needed to preserve a phenotypically stable limbus until the underlying tissue threatens it.
4. Lowest recurrence rate but most time-consuming procedure requiring more surgical skill.

D. Amniotic Membrane Grafting

E. Adjuvant Treatments:

A) MMC (Mitomycin C)

B) Fluorouracil (5-FU).

C) Topical Monoclonal Antibodies Against Vascular Endothelial Growth Factor (anti-VEGF)

D) Radiotherapy used in the past but no longer appropriate since risks outweigh benefits

13. Complications of Pterygium Surgery

- A. Various complications of pterygium surgery can be divided into intra-operative complications and postoperative complications.
 - B. Intraoperative complications include excessive bleeding, injury to the medial rectus muscle, wide excision of the pterygium, button-holing of graft, thick graft, loss of orientation of the graft, smaller harvested graft, and perforation of the globe with the suture needle.
 - C. The main postoperative complication is RECURRENCE.
 - D. Other postoperative complications Patient Education Regarding Pterygium Surgery
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- A. Patients with pterygium should be informed about the chances of recurrence after surgery.

- B. Postoperative mitomycin drops or steroid drops should be strictly used under the supervision of the surgeon.
- C. Unsupervised use may lead to the melting of the cornea or sclera, resulting in loss of vision and may even result in medicolegal suits.
- D. In elderly patients, OSSN may masquerade as pterygium, and histopathological examination of such tissue is important in ruling out OSSN.
- E. With the results of the Eyedrops for Pterygium Study looking so promising and safe, this alternative should be considered for patients who qualify

14. Co-Management to Enhance Pterygium Treatment Outcomes

- A. Management of pterygium still requires a lot of attention to detail before, during and after surgery.
- B. Post-operative Eyedrop Regimen
- C. The Literature is full of a variety of surgical procedures with variable success rates.
- D. However, the recurrence of pterygium still remains the most inexplicable complication. Eyedrops as a possible treatment of choice.

15. Current FDA Study – We are still enrolling patients around the country!

- A. Background of the effective agent to effect regression of scarring and vascularization – prior success in treating pulmonary fibrosis.
- B. Eyedrop as Treatment of Pterygium: Mechanism of Action
- C. Inclusion Criteria
- D. Exclusionary Criteria

- E. Protocol – eyedrops twice a day for 2 years. Multiple visits and tests required. Subjects receive financial compensation for each visit. No charge for study meds.

- F. How to find out if a patient qualifies for this FDA Eyedrop Study

- G. Because inclusion criteria are very restrictive, most patients referred will unfortunately not qualify for the study, but will qualify for one of the currently FDA approved procedures

16. Case Studies

17. Conclusions