The Importance of Sealing the Gap between Conjunctiva and Tenon in Pterygium Surgery

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Questions

1. Why is the recurrence rate so *variable* for each surgical technique? (0.4-89%)

2. Why do most *complications* occur in the nasal *caruncle*, such as recurrence, granuloma and motility restriction?

3. Is there any correlation between the thickness of fibrovascular tissue and the flattening of the caruncle in *grading* pterygium severity?
Correlation between Pterygium Grading & Caruncle Morphology
How does Pterygium Affect Caruncle & Semilunar Fold

Pterygium flattens the caruncle and drags the semilunar fold.
1. Pterygium surgeries create a Gap between the conjunctiva and the Tenon.
2. Recurrence occurs because of failure to seal the Gap.
3. Sealing the Gap is overlooked and its closure uncertain, resulting in an uncontrolled variable and variable success rates in all surgical procedures.
4. Successful sealing of the Gap is the most critical step of any pterygium surgery, and will
   - Restore a normal caruncle
   - Create a strong barrier to prevent outgrowth of fibrous tissue to reduce the recurrence and ocular motility restriction
   - Reduce the inflammation-related complication such as granuloma formation

Hypothesis
Conclusion

Sealing the gap is important to:

- Create a normal caruncle
- Prevent the recurrence
- Restore ocular motility
- Reduce the postoperative complications