# Does the use of antiglaucoma agents impact the surgical outcomes of ptosis surgery?

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## Purpose

To assess whether the use of antiglaucoma agents impacts surgical outcomes in patients undergoing ptosis surgery.

## Method

Retrospective analysis of 560 consecutive adult ptosis surgery performed by a single consultant over 7 years.

- All patients had anterior approach levator advancement
- 40 eyes (7%) had glaucoma
- 100% of patients were on antiglaucoma topical therapy
- 36% had additional glaucoma surgery

Follow up: 2 weeks post operative, 3 months and then if required

| Number of eyes on topical therapy or glaucoma filtration surgery | |
|---|---|
| Prostaglandin | 33 |
| Carbonic anhydrase inhibitor | 14 |
| Beta blocker | 24 |
| Alpha adrenergic agonist | 6 |

## Results

Overall 27 eyes **(64%)** had a successful outcome and were subsequently discharged, compared to those without glaucoma - **87%** in our cohort and **77-91%** quoted in the literature

15 eyes (36%) had a complication post operatively, including lagophthalmos, exposure or overcorrection

**2 week follow up:**

- 9 eyes (21%) had lagophthalmos post operatively ranging from 0.5-3mm
- 11 eyes (26%) had exposure keratopathy
- 3 eyes (7%) were overcorrected

**3 month follow up:**

- 3 eyes had lagophthalmos
- 2 eyes had exposure keratopathy
- 2 eyes were overcorrected

The majority of complications were transient, however 2 patients (one on a carbonic anhydrase inhibitor) needed subsequent eyelid lowering (levator recession) surgery due to persistent overcorrection and noticeable conjunctival cicatrisation.

**Carbonic anhydrase inhibitors were associated with the greatest impact on outcomes which was statistically significant.**

Although patients with trabeculectomies who weren't on topical therapy in the last year were excluded, having a trabeculectomy did not significantly impact surgical outcomes.

## Conclusion

Our results showed that long term use of antiglaucoma drops can lead to outcomes being less predictable, with a higher incidence of overcorrection and or lagophthalmos, with consequent exposure keratopathy.

This can be attributed to a number of possible reasons such as cicatricial conjunctival changes and lipo-atrophy. We feel that perhaps antiglaucoma treatment could impact on postoperative conjunctival middle lamellar scarring.

We recommend meticulous preoperative planning, surgical modifications and perioperative eyelid height titration when undertaking ptosis surgery in patients with glaucoma.

## References

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