**Reviewer's report**

**Title:** Postoperative IOP prophylaxis practice following uncomplicated cataract surgery: a UK-wide consultant survey

**Version:** 1  **Date:** 7 March 2005

**Reviewer:** Clemens Vass Vass

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This is an interesting survey on IOP prophylaxis practice in UK. The authors are commended for their great work on collecting information about the current practice. They demonstrate the lack of agreement between surgeons about IOP prophylaxis and achieved an acceptable response rate of 61%.

- **Major Compulsory Revisions**

1) Abstract is missing. The authors are recommended to adhere to the instructions for authors also for the other sections (eg. conclusions missing too)

2) The authors should include the exact questions and forced choices posed to the surgeons in the methods section. The wording of a question might influence the answer. This might especially hold true for the question regarding "adverse event related to postoperative IOP elevation" This might be interpreted in very different ways.

3) IOP elevations mostly occur within the first few hours and may last a few days. They usually resolve spontaneously within a few days after uncomplicated surgery. There might thus be a relation between the timing of first IOP measurement and the experience of IOP related adverse events. It would be interesting to know a) the distribution of the timing of the first IOP measurement for both groups of surgeons separately and b) whether there is an interaction between this timing and the experience of IOP related adverse events for one or both groups and c) whether there is a difference between groups for this interaction.

4) Discussion (paragraph 3, lines 3...) "Only 10.9% of our responders check IOP within 24 hours of surgery. This eliminates the need of hospital visit on first post-op day ..." This is conflict with the data presented in the results section (10% measure the IOP on the day of surgery and another 29% on the first postop day). Additionally the fact that IOP measurement is frequently not performed before the 1st or 2nd week does not eliminate any need, but simply reflects the practice that the early postop visits in many settings have been eliminated. This reflects the relatively low frequency of severe IOP elevation 1 day postoperatively, the self limiting nature of IOP spikes and the tolerance of a healthy eye.

5) Discussion (paragraph 4): It is very difficult to draw conclusions from the fact that only 20% report they had encountered an adverse event related to IOP rise. First it seems possible that surgeons not always associate an adverse event to a (likely missed) early IOP spike (since IOP was not
measured on the day of surgery by most responders). Secondly it remains unkown how often surgeons who reported they had encountered such complications actually did see these complications. It furthermore seems possible that the number of cataract surgeries of those who have encountered these complications may differ from those who did not.

6) Discussion: The authors provide a valuable comment that the RCTs so far have used IOP as surrogate marker and that an actual change of adverse events related to IOP rise remains questionable. While this is true, they should also lay a focus on estimating different potential risks of short-time IOP elevation in elderly people. (see additional references)

8) The authors should also discuss the difference between lacking evidence and negative evidence. It might be inferred by the reader that the lacking evidence of (end point related) benefits of IOP lowering following cataract surgery means that prophylaxis has proven ineffective. In fact there is no positive or negative prove in this field. It may still be wise to use prophylaxis since the possible small (but unproven) effect has only negligible trade-offs in terms of complications and cost at least for topical therapy.

9) Discussion (last page): "what is very striking is that there is a similar proportion of surgeons in the diametrically opposite groups who believe that their practice is evidence based". This statement iis incorrect because it ignores that 2 of 3 surgeons not using prophylaxis did not answer to this question whereas only 0.5% of those who used prophylaxis did not answer. It is this difference that strikes me. I get the impression that many surgeons not using the prophylaxis are not sure whether their therapeuetic regime is optimal or did not really consider the alternatives. When correcting for these non-responders the data may be read in a different form: of those not using prophylaxis only 13% think their choice is evidence based, 23% say it is based on personal experience and 7% on unit policy, while 66% don't know. Of those using prophylaxis the figures are 33%, 66% and 23%, while only 0.5% did'nt know. This difference in responders and possible explanations should be included in the discussion.

10) additional References

Tinley, C. G. et al. Br J Ophthalmol 2003; 87:1350-1355 report frequencies of 8% IOP elevation (25-48 mmHg) on day 1 visit.

Thirumalai, B. et al. J Cataract Refract Surg 2003; 29:504-507 report a 10% frequency of IOP elevation above 35 at 2 hours postoperatively. This may usually be irrelevant in case of a healthy optic nerve. Two risks however should be discussed: the risk of retinal venous thrombosis and the risk of glaucoma progression in case of undetected glaucoma. The prevalence of undetected normal tension glaucoma may be as high as 0.5-1% at an age of 75 years. Preoperatively cataract may prevent correct judgment of the optic nerve head.

- Discretionary Revisions

The authors should present percentages of the use of the different topical agents.

**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** No

**Declaration of competing interests:**

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