

Comparison of clinical outcomes, patient and surgeon satisfaction following topical versus peribulbar anesthesia for phacoemulsification: A randomized controlled trial

Dear sir,

The authors Dole *et al.* need to be congratulated for a randomized controlled trial on this important topic with an impressive sample size.^[1] However, the trial randomized controlled trials follows Consolidated Standards of Reporting Trials guidelines for reporting trials only partly.^[2] There are no details in the methods section on how random allocation, actual allotment, and masking was done. Were serially numbered sealed envelopes used? Was this done in a different location? Assuming 1:1 randomization, there is a skewed allotment for surgeon 1 and surgeon 2 for both groups. For surgeon 1 is doing disproportionately more peribulbar anesthesia and surgeon 2 almost double the number by topical anesthesia. Such a chance is unlikely (if the randomization is done with an epi-table) and could be because surgeons "chose" their anesthesia as per their comfort and convenience.

The study also does not document time of surgery, a significant factor while doing the procedure under topical anesthesia. In Table 2, conjunctival congestion was worse

after topical anesthesia, 147 (29.4%) eyes had it compared to 76 (15.2%) eyes with peribulbar anesthesia. This is contrary to the experience of most surgeons. A "white" eye after surgery is an additional attraction of topical anesthesia. The 4–6 weeks visual acuity has no bearing on the results of the study. Visual acuity estimation a few hours or second day of surgery would be more useful in demonstrating if either technique led to earlier visual rehabilitation.

The authors do not elaborate about how the main outcome measures: The pain scores were calculated during the trial. Did they use a Likert scale? Were they purely subjective? Why was the intra-operative discomfort more in peribulbar, as compared to topical anesthesia? Ideally a peribulbar anesthesia surgery should be without any discomfort. The author state pain analogue score was more in topical anesthesia – How was this asked? The surgeon comfort was much less in topical anesthesia. With both these statements, should the authors recommend topical anesthetics a routine anesthesia technique of choice?

The authors also excluded from the study grade IV cataracts, small pupils, pseudoexfoliation and subluxated lenses, conditions in which the cataract surgery may presumably take longer. Peribulbar anesthesia would definitely be a better choice for such patient.

A no-iris-touch surgery is a prerequisite for a comfortable topical anesthesia surgery as the topical lignocaine does not reach the uveal vasculature in a significant amount. Hence while topical anesthesia does away with the needle prick, its fear and risk; it is said a sub-optimal anesthesia as iris sensations remain and may not make the procedure entirely comfortable for the patient and the surgeon as aptly demonstrated in the meta-analysis.^[3] Peribulbar block also maintains mydriasis by paralyzing the ciliary ganglions. So topical anesthesia should only be recommended for certain, not all, types of cataract surgery with phacoemulsification. The final objective of all cataract surgeries is to have the earliest and most comfortable visual rehabilitation.^[4]

Sub-tenon anesthesia can be a golden mean, doing away the risk and fear of needle prick, yet giving the iris anesthesia and mydriasis so important for a comfortable cataract surgery.^[5]

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