



COMPARATIVE STUDY OF PERIBULBAR ANAESTHESIA (PA) AND TOPICAL ANAESTHESIA (TA) FOR SMALL INCISION CATRACT SURGERY (SICS)

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ABSTRACT The current use of topical anaesthesia for SICS began in 1991. Ophthalmic anaesthesia has its own unique challenges. There has been advancement in technique from regional anaesthesia to TA. There are so many advantages for the patients as well as for the surgeons. TA saves the patients from risk of globe perforation, optic nerve injury, also from pain & fear due to peribulbar injection. TA should be safe for SICS. But there is great dilemma remain regarding the paramountcy of one over the other technique as both the technique have some merits and demerits.

KEYWORDS : Small incision cactract surgery (SICS), Topical Anaesthesia (TA) , Peribulbar Anaesthesia . . (PA)

Introduction:- As we are practicing in remote place, SICS is still in practice. PA is very common earlier, but there has been shift towards TA also. TA for cactract surgery has advantage of avoiding all the problems associated with the injections, but the disadvantage of increase anxiety for the patients as well as surgeons. In the term of surgical comfort complete anaesthesia and akinesia of eye ball is achieved by injectable methods . TA is well established in selected patients for phacoemulsification. but SICS with intraocular lens implantation is also possible under TA in cooperative and uncomplicated patients. It is debatable to stamp out the supremacy of one type of anaesthesia over the other.

Material & Method:-

A Prospective randomized study of 140 patients was carried out in last 6 month period. All the patients diagnosed with cactract written informed consent for all the patients taken . They were divided into two groups, 70 patients of each group. Patients are from age of 52 Yrs to 80 Yrs. both male & female included. Exclusion criteria were corneal opacity, complicated cactract, associated systemic morbidity, patients who have communication problem like sort of hearing language barriers and dementia.

Group A of 70 patients underwent PA
Group B of 70 patients underwent TA

All the surgeries were done by single surgeon by SICS technique. Intraocular lens was implanted in all uneventful cases. It was modified minimal duration cactract surgery, where SICS without superior rectus stitch, conjunctival flap or cautery in group B patients

- Group A patients received 4-5 ml of local anaesthetic (2% Xylocaine +0.5% sensorcaine in equal quantity) in peribulbar region.
- Group B patients received TA by using 0.5% aqueous solution of proparacaine in conjunctival sac at every 5 min. for half and hour before surgery.
- No sedative was given to any of the patients. satisfaction level of patients and surgeons, occurrence of complication, akinesia & analgesia level studied between two groups & compared.

Results:- Patients satisfaction level is more in group B (62 Patients, 88.5%) as compared to group A (32 patients, 45.7%) noted. Surgeon satisfaction level is more in group A (60 patients 88.5% as compared to group B (40 patients 57.1%) In our study 3 patients develop subconjunctival haemorrhage as a complication of PA (Group A), where as in TA (group B), there were 5 patients develop corneal edema as intraoperative complication which is relieved within 5 min . by inserting HPMC viscomer by ophthalmologist. Analgesia (65 patients) and akinesia (67 patients) both are satisfactory recorded in group A as compared to group B. None of the patients in group B had akinesia effect.

Table:-1 Different parameter comparison between group A and group B

No.	Parameter .	Group A (70 patients)	Group B (70 patients)
1	No. of Patients fully satisfied	32 (45.7%)	62 (88.5%)
2	No. of Patients in which surgeon fully satisfied with surgery .	60 (85.7%)	40 (57.1%)
3	No. of patients having intraoperative complications.	3 (4.2%) (sub conjunctival haemorrhage)	5 (7.14%) (corneal edema)
4	No. of patients having satisfactory akinesia.	67 (95.7%)	0 (0%)
5	No. of patients having complete analgesia during surgery.	65 (92.8%)	60 (85.7%)

Discussion:- While PA was disadvantage of pain, discomfort & heaviness during the initial phase of injection, but it has advantage of painless surgery during the rest of the procedure. In other view, TA has major advantage of totally painless phase during anaesthesia but big disadvantage of anxious phase during entire surgical procedure. Some other advantages with TA are:- cost effective, more patient satisfaction , immediate visual recovery, avoid prolonged akinesia of eye post operatively avoidance of sight threatening complications, patient can have surgery without discontinuation of systemic anticoagulants or aspirin. There are some disadvantages with TA are:- lack of akinesia which make technical difficulty, not suitable for extended surgery, well informed and motivated patients required . The key to successful cactract surgery with TA is surgeon-patient communication.

The ocular movements were quite marked in TA. but mobility is not a problem for experienced surgeons. TA is justified as a means of improving safety without causing discomfort to the patients . Highest patient satisfaction was reported in group B as compared to group A. This could be due to initial pain free phase of TA as compared to painful injection of PA. Contrast to this, highest surgeon satisfaction was reported from group A as compared to group B. This shows that surgeon satisfaction was more with PA. due to less intraoperative eye movements. better eye focusing, So there is less intraoperative complications with PA. We feel that surgeons's satisfaction should be given more preference over patients's satisfaction because surgical outcome is better if surgeon is comfortable. In our study we have not seen complication like globe rupture, nerve damage, peribulbar haemorrhage, but there were studies that shows there is sight threatening complications may reported with PA.

Conclusion:-

TA can be effective option for modified SICS with intraocular lens implantation in suitable patients, While TA provides initial painless phase of surgical procedure, PA provides lesser intraoperative

complications, that result in better visual outcome. TA is safer alternative to PA, which reduces time & cost of surgery as well as good level of patients satisfaction .

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