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Original Research Article

To stop or to continue aspirin prior to manual small incision cataract surgery

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ABSTRACT

Aims: To ascertain whether to stop or continue aspirin before cataract surgery.
Materials and Methods: Prospective observational study from July 2018 to June 2019. Information on pre-existing medical conditions like cardiac disease/stroke & use of Aspirin was obtained from patients posted for cataract surgery. Physical examination was done by physician & decided whether aspirin has to be stopped before surgery. Intra-operative and post-operative outcomes were recorded.
Statistical analysis used: SPSS 20.0 by using descriptive statistics i.e. only frequency and percentage.
Results: Out of 64 patients, 38 discontinued aspirin and 26 continued. In the group of patients who discontinued aspirin, 2 had bleeding complication in the form of bleeding from cut ends of conjunctiva. Where as in the group who continued aspirin 4 patients had bleeding complication. No thromboembolic events were recorded in both the groups.
Conclusions: The risk of medical & ophthalmic events surrounding cataract surgery were so low that absolute differences in risk associated with changes in Aspirin use were minimal.

1. Introduction

According to WHO cataract surgery is the most frequently performed surgical procedure in the world. Large proportion of patients for cataract surgery belong to elderly population, who also have age related comorbidities.[1] Antiplatelet agents and anticoagulants are used to minimize the risk of thromboembolic events in coronary heart disease or other vascular diseases. Some consider discontinuation of anti-thrombotic therapy as routine to minimize the risk of bleeding during surgery, it may be potentially harmful for those with higher risk of thrombosis.

Aspirin acts as a weak anticoagulant by reducing platelet aggregation. It is an anti-inflammatory and anti-platelet agent whose effect is mediated through irreversible inhibition of cyclo-oxygenase 1 and 2(COX1 and COX2). Its anti thrombotic action is primarily due to inhibition of COX1. Low dose aspirin (75-150mg/day) is used to produce anti platelet effect.[2,3]

Patients taking such agents may be at higher risk for ocular haemorrhages, bur if the therapy is halted, patients may have increased risk of medical events for which the therapy was prescribed. Hence, there is a question of whether the risk of adverse medical events associated with temporarily stopping aspirin therapy before cataract surgery overweighs the benefits of fewer hemorrhagic events. In this study, the question of whether routine users of Aspirin who continued their therapy before cataract surgery experienced different risks of ocular hemorrhage or thrombo-embolic events than did those who discontinued is determined.

2. Aim of the Study

To ascertain whether to stop or to continue aspirin before cataract surgery.

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Table 1: Ocular haemorrhagic complications in the 2 groups

Parameters	Group 1	Group 2	Total
Conjunctival bleeding	1	3	4
Retrobulbar haemorrhage	1	1	2
Total	2	4	6

3. Materials and Methods

A prospective observational study was conducted recruiting consecutive cases who were posted for cataract surgery and were taking aspirin therapy for a pre-existing medical condition from July 2018 to June 2019. 64 patients were included in the study.

They were divided into 2 groups:

Group 1 – Aspirin therapy stopped 3 days prior to surgery.

Group 2 – Aspirin therapy continued through out the surgery.

Patients were excluded if they had a history of myocardial infarction within the past 3 months or general anesthesia was planned

3.1. Methods of collection of data

Information on pre-existing medical conditions and usual medication use were obtained. History and physical examination were done by a physician at the time he/she cleared the patient for surgery. Whether aspirin has to be stopped before surgery was decided by the Physician himself based on the cardiac risk. Intra-operative and post-operative outcomes were recorded. Written Informed consent was taken. Ethical committee clearance accorded.

Data analysis was done by entering data into MS EXCEL and statistical analysis was performed with the help of SPSS by using descriptive statistics i.e. only frequency and percentage.

4. Results

Out of 64 patients, 35(54.68%) were males; 29(45.32%) were females. The mean age of the patients included in the study was ≈63 years.

Among 64 patients, 38(59.4%) discontinued aspirin 3 days prior to surgery and 26(40.6%) continued using aspirin throughout. All the patients underwent Manual Small Incision Cataract Surgery under Peri-bulbar Anaesthesia. In the group of patients who discontinued aspirin, two had bleeding complication like bleeding from the cut ends of the conjunctiva & retrobulbar haemorrhage, where as in the group who continued aspirin four patients had bleeding complications (Table 1). Surgery was postponed for patients who had retrobulbar haemorrhage following local anaesthetic injection. Bleeding complications like lid ecchymosis, conjunctival ecchymosis or hyphema were not observed among the study subjects. No thromboembolic events were recorded in both the groups.

To know the significance of the complications in association with the use of aspirin, p value was derived using Chi-square distribution calculator.

p value obtained is 0.5403. Result is not significant as the p value is more than 0.05.

5. Discussion

Cataract surgery is a safe surgery, despite the large number of elderly patients with high rates of co-morbidities undergoing the surgery.[4,5] The rates of all adverse events were extremely low. Among routine users of Aspirin, there was no evidence to suggest that patients who continued use were at an increased risk of ocular hemorrhagic events, nor that those who discontinued use were at increased risk of medical events.

Katz J et al., showed among routine users, 22.5% of aspirin users & 28.3% of warfarin users discontinued these medications before surgery. The rate of thrombo-embolic events were 1.5/1000 & 3.8/1000 among those who discontinued & continued its use respectively.[6]

Kobayashi H et al., depicted although there was no significant intraoperative bleeding in any case, 47 out of 173 in maintenance group & 31 out of 182 in the discontinuation group had subconjunctival hemorrhage post operatively.[7]

Assia EI et al., suggested that continuing aspirin had negligible effect on intraocular bleeding. The only significant difference among the 2 groups was slightly greater need for diathermy in patients who continued medication.[8]

Barequet IS et al., among 51 eyes noted no ocular hemorrhagic or thrombo-embolic events during surgery & 1 week follow-up.[9]

Limitations of the study are Small sample size and Selection bias.

6. Conclusion

The risk of medical & ophthalmic events surrounding cataract surgery were so low that the differences in risk associated with changes in routine Aspirin use were minimal. Hence, Aspirin can be continued during cataract surgery without significant complications.

7. Source of Funding

None.

8. Conflict of Interest

The authors declare that there is no conflict of interest.

References

1. Kara-Junior N, Koch CR, Santhiago MR, Fornari L, Caramelli B. Anticoagulants and antiplatelet drugs during cataract surgery. *Arq Bras*

Oftalmol. 2018;81(4):348–53. doi:10.5935/0004-2749.20180069.
2. Oprea AD, Popescu WM. Perioperative management of antiplatelet therapy. *Br J Anaesth*. 2013;111(S1):i3–i17. doi:10.1093/bja/aet402.
3. McClellan AJ, Flynn HW, Smiddy WE, Gayer SI. The Use of Perioperative Antithrombotics in Posterior Segment Ocular Surgery. *Am J Ophthalmol*. 2014;158(5):858–9. doi:10.1016/j.ajo.2014.08.003.
4. Grzybowski A, Ascaso FJ, Kupidura-Majewski K, Packer M. Continuation of anticoagulant and antiplatelet therapy during phacoemulsification cataract surgery. *Curr Opin Ophthalmol*. 2015;26(1):28–33. doi:10.1097/icu.0000000000000117.
5. Li Q, Qian Y, Zhang Y, Sun G, Zhou X, Wang Z. Continuation of aspirin therapy before cataract surgery with different decisions: safe or not?". *J Ophthalmol*. 2018;p. 1–6. doi:10.1155/2018/6543937.
6. Katz J, Feldman MA, Bass EB, Lubomski LH, Tielsch JM, Petty BG, et al. Risks and benefits of anticoagulant and antiplatelet medication use before cataract surgery. *Ophthalmology*. 2003;110(9):1784–8. doi:10.1016/s0161-6420(03)00785-1.
7. Kobayashi H. Evaluation of the need to discontinue antiplatelet and anticoagulant medications before cataract surgery. *J Cataract Refract Surg*. 2010;36:1115–9.
8. Assia E, Raskin T, Kaiserman I, Rotenstreich Y, Segev F. Effect of aspirin intake on bleeding during cataract surgery. *J Cataract Refract Surg*. 1998;24(9):1243–6. doi:10.1016/s0886-3350(98)80020-5.
9. Barequet IS, Sachs D, Shenkman B, Priel A, Wasserzug Y, Budnik I, et al. Risk assessment of simple phacoemulsification in patients on combined anticoagulant and antiplatelet therapy. *J Cataract Refract Surg*. 2011;37(8):1434–8. doi:10.1016/j.jcrs.2011.02.035.

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