

Perioperative use of low-dose aspirin

The following guidance was published in a review of perioperative medication in patients with cardiovascular disease (1):

Low-dose aspirin induces an irreversible inactivation of platelet cyclooxygenase, which lasts the lifetime of the platelet (seven to 10 days on average). There is no absolute consensus about whether or not low-dose aspirin should be continued perioperatively. The risk of haemorrhage must be balanced against the risk of predisposing the patient to a thromboembolic complication, such as a coronary event, transient ischaemic attack or stroke. Reports of myocardial infarction following cessation of aspirin before coronary artery bypass graft surgery, suggest that aspirin should not be stopped.

It is uncommon for serious complications to occur in patients taking aspirin during the perioperative period, though surgical blood loss is increased. It is sensible to withdraw aspirin in patients whose risks of postoperative bleeding are high. Patients undergoing transurethral prostatectomy have been found to have significantly increased perioperative bleeding if aspirin is continued and so, for these patients, aspirin is usually discontinued 7 - 10 days pre-operatively; other examples include patients undergoing retinal, major orthopaedic or intracranial surgery. Patients undergoing minor surgery do not need to stop aspirin.

A review of bleeding risks associated with aspirin was carried out on 49,590 patients (14,981 taking aspirin). The baseline frequency of bleeding complications varied from 0% (skin lesion excision, cataract surgery) to 75% (transrectal prostate biopsy). Whilst aspirin increased the rate of bleeding complications by a factor of 1.5, it was not associated with more severe bleeding complications (with the exceptions of intracranial surgery, and possibly transurethral prostatectomy). The reviewers concluded that low-dose aspirin should be discontinued prior to surgery only if the risk of bleeding and increased mortality or sequelae was comparable with the increased cardiovascular risk associated with aspirin withdrawal, (2).

Patients taking aspirin may also be at an increased risk of haematoma formation with spinal or epidural anaesthesia. There are reports showing the safety of regional anaesthesia in patients receiving aspirin or other NSAIDs but the clinical significance of this is of considerable debate and some anaesthetists may wish to avoid this practice.

If stopped, aspirin is usually restarted when diet returns to normal. Following transurethral prostatectomy aspirin is sometimes withheld for one week.

References:

1. Rahman MH, Beattie J. Peri-operative medication in patients with cardiovascular disease. *Pharm J* 20 Mar 2004;272(7291):352-354
2. Burger, et al. Low-dose aspirin for secondary cardiovascular prevention - cardiovascular risks after its perioperative withdrawal versus bleeding risks with its continuation - review and meta-analysis. *J Intern.Med* 2005;257:399-414.

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