Should consumers be warned about aspirin, alcohol and gastric bleeding?

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Summary

The risk of gastrointestinal bleeding is increased in people who regularly take high doses of aspirin and consume more than three alcoholic drinks a day, but it may also be increased in drinkers who take low-dose aspirin. The intensively competitive non-prescription analgesic market is sensitive to the presence or absence of cautionary and advisory statements, irrespective of the particular analgesic. Australian health authorities have decided against introducing a requirement for aspirin products to have labels advising people who consume more than certain amounts of alcohol to seek medical advice before taking aspirin. The mandatory imposition of such a label is controversial.

Key words: analgesics, over-the-counter medicines.

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Introduction

In 2002, the Therapeutic Goods Administration asked the Medicines Evaluation Committee to update its 1998 review on non-prescription analgesics*. One of the terms of reference was to consider the need for the labels on Australian packages of aspirin and other non-steroidal anti-inflammatory drugs (NSAIDs) to have the same mandatory statement as in the USA. This statement reads: 'If you consume three or more alcoholic drinks every day, ask your doctor whether you should take [name of drug] or other pain relievers/fever reducers. [Name of drug] may cause stomach bleeding.'

The gastrointestinal effects of aspirin

Salicylates may cause epigastric distress, nausea and vomiting. Gastric ulceration and haemorrhage may also occur. High doses of salicylates can exacerbate the symptoms of peptic ulcer such as heartburn and dyspepsia. Gastric bleeding induced by the salicylates is usually painless and at the recommended dose of over-the-counter aspirin, the blood loss is usually of little significance.

* www.tga.gov.au/docs/html/analgesics.htm [cited 2005 Jan 10]

The gastrointestinal effects of alcohol

Alcohol can cause gastric inflammation and bleeding. A large controlled study in the USA showed that the relative risk of major gastric and duodenal bleeding in non-predisposed individuals was 6.3 when at least 35 standard drinks were consumed weekly.[1] It is important to note that there are differences from country to country in the mass of ethanol in a 'standard drink'. In Australia it is 10 g, but in the USA it is 14 g.

Aspirin with alcohol

The clinical significance of using alcohol and aspirin together is uncertain. Complicating factors in studies include:

- the doses selected for each
- the duration of the study
- the proximity of dosing with each substance
- whether other drugs are taken
- whether the participants are healthy volunteers or people with a history of gastrointestinal disorders.

Epidemiological studies have their own shortcomings, such as the participants' candour about their alcohol consumption and their recollections of analgesic use.[2]

A major epidemiological case-control study based on data collected in the USA and Sweden sought to evaluate whether the deleterious effects of aspirin and other NSAIDs were increased among drinkers.[3] The relative risk of acute upper gastrointestinal bleeding was 2.8 times higher for people who consumed at least 21 drinks per week, than for people who consumed less than one drink per week. The relative risk for all current drinkers increased to 7.0 if they were taking more than 325 mg aspirin at least every other day.

A careful analysis of this study agreed that the relative risk of gastrointestinal bleeding due to aspirin, along with an increasing baseline risk with increasing alcohol intake, is consistent with a rising incidence of gastrointestinal bleeding in aspirin users who are heavy drinkers.[4] The data supporting an additive effect of aspirin and alcohol on the risks of gastrointestinal bleeding are controversial because:

- the relative risk of taking aspirin did not consistently increase with increasing alcohol use for occasional or regular takers of aspirin or for different doses of aspirin
- while the non-drinking controls had a relative risk of bleeding that was increased from baseline by taking NSAIDs, it did not differ statistically from the risk in patients who combine aspirin and alcohol

- irrespective of the dose, kind or frequency of NSAIDs taken, no significant difference was reported to exist overall between NSAID users who described any current drinking, those who were ex-drinkers, and those who never drank.

There is no proof that mild to moderate alcohol use significantly increases the risk of upper gastrointestinal bleeding in patients taking aspirin, especially if the aspirin is taken only as needed. However, people who consumed **at least** 3–5 drinks daily and who regularly took more than 325 mg of aspirin did have a high risk of bleeding.

Commercial considerations

The Medicines Evaluation Committee, while acknowledging the evidence, did not recommend an alcohol warning on labels of aspirin products. A similar warning which appears on US labels of paracetamol with 'liver damage' replacing 'stomach bleeding' was also rejected for Australia. The issue is whether, in order to maintain a degree of commercial parity in the highly competitive over-the-counter analgesic market, both paracetamol and aspirin/NSAIDs should have an alcohol statement (for different reasons) or neither should have it. Anything that will encourage product differentiation can operate to favour one product or, on the other hand, disadvantage its competitor by invidious comparison. Media advertisements that use the term 'gentle to the stomach' for paracetamol suggest, by innuendo, that other over-the-counter analgesics might be less than gentle. However, for most people, the use of over-the-counter doses of aspirin, ibuprofen or paracetamol carries little risk. The regulatory authorities therefore decided not to interfere in the market by imposing mandatory warning labels.

What do clinicians do?

At-risk patients need to be identified. Patients may understate their consumption of alcohol and not think that aspirin and other over-the-counter NSAIDs can cause problems. The clinician may need to alert patients to the risks of all medicines, not just those obtained on prescription. Heavy drinkers who regularly take aspirin are at particular risk of gastrointestinal bleeding.

References

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Further reading

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Conflict of interest: none declared

New drugs

Some of the views expressed in the following notes on newly approved products should be regarded as tentative, as there may have been little experience in Australia of their safety or efficacy. However, the Editorial Executive Committee believes that comments made in good faith at an early stage may still be of value. As a result of fuller experience, initial comments may need to be modified. The Committee is prepared to do this. Before new drugs are prescribed, the Committee believes it is important that full information is obtained either from the manufacturer's approved product information, a drug information centre or some other appropriate source.

Articaine hydrochloride with adrenaline

Septanest, Deltazine, Bucanest (Specialites Septodont)

1.7 mL glass cartridges containing 4% articaine and 1 in 100 000 adrenaline

Approved indication: dental anaesthesia

Australian Medicines Handbook section 2.4

Articaine is a local anaesthetic that has been approved overseas for several years. Like other amide anaesthetics, articaine blocks nerve conduction when it is infiltrated around a nerve. This action is prolonged by combining the drug with a vasoconstrictor such as adrenaline.

The combination of articaine and adrenaline can be used for local or regional anaesthesia for dental procedures. Anaesthesia begins within six minutes and lasts for an hour. The half-life of articaine is approximately 1.8 hours. It is metabolised and then mainly excreted in the urine.

Articaine 4% with adrenaline was compared with lignocaine 2% with adrenaline in three double-blind trials. The drugs were given as submucosal infiltrations or nerve blocks before dental procedures. There were no significant differences, on a visual analogue pain scale, between the anaesthesia achieved by the 882 patients given articaine and the 443 given lignocaine.[1]

Approximately one patient in five reported an adverse event after dental anaesthesia. The most common complaint in both groups was postoperative pain, followed by headaches and facial swelling. Although the incidence was less than 1%, paraesthesia and hypoesthesia affected more of the patients treated with articaine. Although some patients developed changes in pulse and blood pressure these could have been related to anxiety