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Australian Sports Drug Agency (ASDA) Drugs in Sport Hotline – a confidential, free call service for athletes and their support staff that offers information on the status of Australian pharmaceutical medications and substances in sport
Phone: 1800 020 506

Conflict of interest: none declared

Self-test questions

The following statements are either true or false (answers on page 105)

1. Caffeine is a prohibited substance in elite sports.
2. The prescription of a topical corticosteroid should be notified to an athlete's sporting organisation.

Medicinal mishap

Ibuprofen and asthma

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Case

A 17-year-old 47 kg male was admitted for an elective inguinal hernia repair. He had a past history of allergic rhinitis (no nasal polyps) and severe chronic asthma. Although he had been admitted to the intensive care unit three times previously, there had been no emergency presentations/admissions for 10 months. His asthma was well controlled with inhaled corticosteroids. The patient had no known allergies to any food or medications.

During a pre-operative consultation, the use of non-steroidal anti-inflammatory drugs (NSAIDs) for analgesia was discussed. The patient had no known prior exposure to NSAIDs or aspirin.

Surgery progressed unremarkably and postoperatively the patient was given one oral dose of 500 mg ibuprofen. Within 15 minutes he became distressed and complained of feeling 'tight' in the chest. Eight puffs of inhaled salbutamol via spacer were given immediately but the patient's respiratory symptoms continued to worsen over the next hour. He required high dependency care with nine doses of nebulised salbutamol and three doses of intravenous salbutamol, in conjunction with intravenous steroids (two doses of 8 mg dexamethasone six hourly). The patient recovered within six hours of the ibuprofen dose and was discharged home the following day after a dose of oral prednisolone (50 mg).

Comment

Aspirin-induced asthma is a distinct clinical syndrome. It is a recognised condition in adults^{1,2} but is considered rare

in children.² There are no tests to identify this syndrome in patients with asthma and the diagnosis is usually established only by observations or by direct re-challenge with aspirin.² Cross-sensitivity with other NSAIDs is possible as the syndrome is thought to be related to the inhibition of cyclo-oxygenase enzymes.^{1,2} A history of rhinitis is also consistent with the syndrome.

Our patient's asthma exacerbation was probably due to ibuprofen as the reaction occurred within 15 minutes of ingestion, symptoms peaked at 45 minutes and there were no symptoms during anaesthesia or in the immediate post-anaesthesia recovery period.

Conclusion

It is important to ask patients with asthma, or their parents, about all non-prescription medications as many people will not associate asthma with the use of aspirin or other NSAIDs, or be aware of the risk of taking these medications. Patients who are aspirin sensitive or at risk can be counselled about the risk of asthma exacerbation and the appropriate selection of analgesics. This advice becomes even more important with the recent relaxation of the scheduling of NSAIDs, increasing their availability without prescriptions.

References

1. Fahrenholz JM. Natural history and clinical features of aspirin-exacerbated respiratory disease. *Clin Rev Allergy Immunol* 2003;24:113-24.
2. Szczeklik A, Nizankowska E, Mastalerz L, Szabo Z. Analgesics and asthma. *Am J Ther* 2002;9:233-43.

Editor's note:

The Adverse Drug Reactions Advisory Committee has received three other reports of similar adverse reactions to ibuprofen in children.