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NEWS BRIEFS from the Aspirin Foundation

Aspirin and the common cold: not just an antipyretic?

Aspirin has long been a household medicine of choice for reducing fever associated with the common cold and 'flu. New research suggests the possibility that other modes of action may contribute to aspirin's therapeutic effects.

Infection by viruses causing the common cold induces an increase in the expression of nitric oxide by epithelial cells in the human airways¹. Nitric oxide has several beneficial properties: it inhibits replication of the virus in infected epithelial cells, reduces its infectivity and inhibits virus-induced expression of pro-inflammatory cytokines. Nitric oxide also plays an important role in modulating the immune response, though this is complex and insufficiently understood at present.

This is important for the role of aspirin because investigators in London have shown that aspirin induces the formation of nitric oxide by vascular epithelial cells by triggering the synthesis of 15-epi-lipoxin A₄². The fundamental mechanism appears to be acetylation of cyclo-oxygenase; if this is the case, aspirin may be the only NSAID to exert this effect. Further research is needed to determine whether these complex properties contribute to aspirin's therapeutic effects.

No difference in tolerability between aspirin and paracetamol

Aspirin is so well established as a symptomatic treatment for the common cold that there are relatively few recent trials of good scientific quality assessing its efficacy and tolerability. Aware that physicians' perceptions of efficacy and tolerability may not be based on sound evidence, European investigators conducted a

large double-blind trial to compare aspirin and paracetamol in adults with acute upper respiratory tract infections typical of flu or the common cold (*Clin Ther* 2005;27:993-1003).

The two drugs were compared in 392 patients with headache, achiness, fever, sore throat and sinus pain. Each took single doses of aspirin or paracetamol 500 or 1000 mg, or placebo.

All treatments reduced fever within 30 minutes and for 6 hours compared with placebo, with no significant differences between equivalent doses of the two drugs. The 1000 mg doses provide greater symptom relief than the lower doses in each case.

The frequency of drug-related side effects was also dose-related. Side effects were more common with both active treatments than placebo but the difference was not statistically significant. All were rated mild or moderate in intensity; the most frequent side effects were increased sweating and gastrointestinal events, with no significant differences in frequency between aspirin and paracetamol. The authors conclude that the safety profiles and tolerability of aspirin and paracetamol were comparable.

Flu season normal so far says HPA

The Health Protection Agency reports low levels of flu and flu-like illness in the UK so far this year, with GP consultation rates comparable with this period last year. Similarly low levels of activity have been reported elsewhere in Europe³.

New evidence of aspirin's efficacy against headache

It is not unusual for the effectiveness of older treatments to be taken for granted and, as a consequence, there may be little high quality evidence to support their use. Not so with aspirin, which has always attracted interest from researchers. Management guidelines in the UK⁴ and the United States⁵ recommend soluble aspirin as a first-line treatment to relieve acute migraine headache in adults and research continues to refine our understanding of its efficacy and to optimise headache relief.

Measuring the absolute benefit of aspirin

Investigators from New York recently evaluated aspirin in the treatment of an acute migraine attack in a double-blind placebo-controlled trial in 401 adults⁶. Sixty percent of participants reported headache of moderate pain intensity and 40 percent reported severe pain intensity; three-quarters did not report nausea.

After a single dose of 1,000 mg aspirin (in tablet form), pain was significantly reduced compared with placebo after one hour, with a duration of action of at least 6 hours. The response rate (change in headache severity at 2 hours from moderate or severe to mild or none) was 52 percent after aspirin and 34 percent after placebo. Headache recurrence rates after 24 hours were similar (21.8 percent for aspirin and 27.7 percent with placebo), which is unsurprising in view of aspirin's duration of action, but significantly fewer patients who took aspirin needed rescue medication (34 vs. 52 percent).

Surprisingly, aspirin was also associated with significant reductions in nausea, photophobia and phonophobia compared with placebo, and this was reflected in improvements in functional ability throughout the assessment period. There was no significant difference in the frequency of adverse events.

Aspirin for migraine headache: what do the guidelines say?

The British Association for the Study of Headache (BASH) guidelines⁴ state:

- aspirin is a first-line treatment for acute migraine headache
- the recommended dose is 600 - 900 mg
- it should be taken as a buffered soluble or orodispersible formulation
- it should be taken early in the course of an attack

- it should not be combined with a low-dose opioid
- it may be taken in combination with metoclopramide or domperidone
- if a triptan alone fails, a combination of aspirin plus a triptan may be tried

References

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