Nonsteroidal Anti-inflammatory Drugs (NSAID) and Cardiovascular (CV) Risk

Australian Rheumatology Association Statement for Consumers

Nonsteroidal anti-inflammatory drugs (NSAID) are used to treat many musculoskeletal symptoms including degenerative or inflammatory arthritis, tendonitis, bursitis and other common aches and pains such as headache, back ache and neck pains. The term NSAID includes 'nonselective' and 'selective' drugs; the latter are referred to on occasions as COX-2 inhibitors or coxibs.

- Commonly used NSAIDs are ibuprofen (Brufen or Nurofen), diclofenac (Voltaren), naproxen (Naprosyn), meloxicam (Mobic) and celecoxib (Celebrex).
- Ibuprofen, diclofenac and naproxen can be purchased directly from a chemist without a prescription.
- While no specific NSAID has been shown to be more effective than any other, some patients respond better to one than another.
- Reports have identified an increased risk of CV events, such as heart attacks and stroke, with both selective and nonselective NSAIDs.
- There is still uncertainty about the level of risk. It is lower in otherwise-well persons and higher in those with CV risk factors such as previous CV event (e.g. a heart attack), smoking, obesity, high plasma cholesterol, high blood pressure, diabetes, male, increasing age, sedentary and family history of stroke or heart disease.
- The risk of adverse effects is lower with smaller doses of NSAIDs given for shorter periods of time.
- Due to these potential adverse effects, any NSAIDs should be used
  - if there is no appropriate alternative
  - in the minimal effective dose and
  - for the shortest possible time for optimal clinical benefit.
- All other modifiable CV risk factors should be assessed, monitored and managed actively in patients taking NSAIDs. If a patient's situation changes with respect to cardiovascular risk factors, the risk-benefit analysis should be reviewed.
- Persons who purchase NSAIDs directly or 'Over the counter' need to be aware of their personal risks and take note of the safety information on the package.
- Conditions for which NSAIDs are taken such as rheumatoid arthritis and osteoarthritis are associated with significant disability and considerable negative impact on overall quality of life. While CV toxicity associated with NSAIDs is recognised, the confirmed benefits of NSAID in patients with arthritis and other chronic inflammatory conditions will far outweigh the potential risks for many patients and should be considered in the risk-benefit analysis of individual patients.

- An anti-inflammatory dose of omega-3 long chain polyunsaturated fatty acids (2.7g DHA/EPA) may be used as an NSAID-sparing medicine and has the added benefit of reducing some CV risk factors in inflammatory disease.
- Patients requiring low-dose aspirin for CV protection should continue to take it regardless of their need for NSAIDs, unless otherwise directed by their doctor due to risk of other adverse effects. Aspirin should be taken at a different time of day from ibuprofen as the beneficial effects of aspirin are blocked by ibuprofen.

While studies continue to assess the extent of the increased CV risk with NSAIDs, it is important that both safety and efficacy are considered. The impact of 30 minutes of daily exercise, stopping smoking and/or the introduction of an optimal dose of omega 3 upon the adverse CV effects of NSAID use remains to be determined.

Therapeutics Committee
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