

Coxibs/NSAIDs: The Controversies

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Non-steroidal Anti-inflammatory Drugs (NSAIDs) are commonly used analgesics for acute and chronic pain. However, as they are non-selective NSAIDs, they can cause various adverse effects due to COX-1 enzyme inhibition. These include platelet dysfunction, impairment of bone healing, renal impairment and gastrointestinal (GI) ulcers and bleeding.

COX-2 selective NSAIDs (or Coxibs) are safer alternatives to non-selective NSAIDs as they are associated with a lower incidence of adverse effects related to COX-1 inhibition. However, in 2004, rofecoxib was found to increase cardiovascular (CV) risks leading to a higher incidence of myocardial infarction and stroke. This led FDA to issue a black box warning on the entire class of Coxibs. In addition, data from retrospective studies, observational trials and meta-analyses were conflicting.

In the last few years, there is evidence to suggest that Coxibs have differential CV effects. It appears that rofecoxib, as well as some non-selective NSAIDs, may increase the risk of CV side effects more than other NSAIDs.