ROFECOXIB FOR OSTEOARTHRITIS

Garner Sarah E, Fidan Dogan, Frankish Ruth R, Maxwell Lara

Garner Sarah E, Fidan Dogan, Frankish Ruth R, Maxwell Lara

Cochrane Database of Systematic Reviews, Issue 08, 2011 (Status in this issue: EDITED (NO CHANGE TO CONCLUSIONS))

DOI: 10.1002/14651858.CD005115.pub1

This review should be cited as: Garner Sarah E, Fidan Dogan, Frankish Ruth R, Maxwell Lara. Rofecoxib for osteoarthritis. Cochrane Database of Systematic Reviews. In: *The Cochrane Library,* Issue 08, Art. No. CD005115. DOI: 10.1002/14651858.CD005115.pub1

A B S T R A C T

Background

Editor's note: The anti-inflammatory drug rofecoxib (Vioxx) was withdrawn from the market at the end of September 2004 after it was shown that long-term use (greater than 18 months) could increase the risk of heart attack and stroke. Further information is available at www.vioxx.com.

Objective

To establish the efficacy and safety of rofecoxib in the management of OA by systematic review of available evidence.

Criteria for considering studies for this review

We searched the following databases up to August 2004: MEDLINE, EMBASE, Cochrane Database of Systematic Reviews, Cochrane Controlled Trials Register, National Research Register, NHS Economic Evaluation Database, Health Technology Assessment Database. The bibliographies of retrieved papers and content experts were consulted for additional references.

Selection criteria

All eligible randomised controlled trials (RCTs) were included. No unpublished RCTs were included in this edition of the review.

Data collection and analysis

Data were abstracted independently by two reviewers. A validated checklist was used to score the quality of the RCTs. Comparable trials were pooled using fixed effects model.

Main results

Twenty-six RCTs were included. The comparators were placebo, diclofenac, ibuprofen, naproxen, nimesulide, nabumetone, paracetamol, celecoxib and Arthrotec. The evidence reviewed indicated that rofecoxib was more effective than placebo (patient global response RR 1.75 95% CI: 1.35, 2.26) but was associated with more adverse events (RR 1.32 95% CI 1.11, 1.56). There were no consistent differences in efficacy between rofecoxib and any of the active comparators at equivalent doses. Endoscopic studies indicated that compared to ibuprofen 800mg three times a day, rofecoxib caused fewer erosions and gastric ulcers at doses of 25mg and 50mg; the difference in duodenal ulcers was evident only at a dose of 25mg. Rofecoxib 50mg also caused more endoscopically observed ulcers greater than rofecoxib 25mg (RR 2.48 CI: 1.21, 5.11). Very few of the trials reported overall rates of GI adverse events although rofecoxib was found to cause fewer GI events than naproxen. Only one of the nine trials comparing rofecoxib to celecoxib reported on the overall rates of GI events and this was a comparison of the higher recommended dose of rofecoxib with the lower recommended dose of celecoxib. Similarly, the three trials in older hypertensive patients that examined the cardiovascular safety of rofecoxib and celecoxib used non-comparable doses; the results of these studies indicated that rofecoxib caused more patients to have oedema and a clinically significant increase in systolic blood pressure. This difference between rofecoxib and celecoxib was not evident in studies conducted in more general populations.

Authors' conclusions

Rofecoxib was voluntarily withdrawn from global markets in October 2004 therefore there are no implications for practice concerning its use. There remains a number of questions over both the benefits and risks associated with Cox II selective agents and further work is ongoing.