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Non-steroidal anti-inflammatory drugs for sciatica.

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Abstract

BACKGROUND: Nonsteroidal anti-inflammatory drugs (NSAIDs) are one of the most frequently prescribed drugs for the treatment of sciatica. A previous Cochrane review on the efficacy of NSAIDs summarised findings for acute and chronic low back pain (LBP) and sciatica. This is an update of the original review (2008) focusing on people suffering from sciatica.

OBJECTIVES: To determine the efficacy of NSAIDs in pain reduction, overall improvement, and reported side effects in people with sciatica.

SEARCH METHODS: We performed electronic searches up to 24 June 2015 in the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE, PubMed, and two trials registers. We searched reference lists of included studies and relevant reviews on the topics for additional trials.

SELECTION CRITERIA: We included randomised controlled trials (double-blind, single-blind, and open-label) that assessed the efficacy of NSAIDs in sciatica. We included all trials that compared NSAIDs to placebo, to other NSAIDs, or to other medication. Additional interventions were allowed if there was a clear contrast for the treatment with NSAIDs in the trial.

DATA COLLECTION AND ANALYSIS: Three review authors independently assessed the risk of bias and extracted the data. Where feasible we calculated pooled results using Review Manager 5.3. We reported pain relief outcomes using mean difference (MD) with 95% confidence intervals (95% CI). We used risk ratios (RR) with 95% CI to report global improvement of treatment, adverse effects, and additional medication. We performed a meta-analysis if possible. We assessed level of evidence using the GRADE approach. We used standard methodological procedures recommended by The Cochrane Collaboration.

MAIN RESULTS: We included 10 trials reported in 9 publications (N = 1651). Only one trial out of 10 was assessed at low risk of bias. Five trials used the currently recommended daily dose for the drug, and two trials used lower daily doses available over the counter. Three trials investigated NSAIDs no longer approved for human use. The follow-up duration was short in all studies but one.Three trials (n = 918) compared the effects of NSAIDs to those of placebo on pain reduction.

The pooled mean difference showed comparable pain reduction (visual analogue scale, 0 to 100) in the NSAIDs and placebo groups (MD -4.56, 95% CI -11.11 to 1.99). Heterogeneity was high (I^2 = 82%), and the quality of the evidence was very low. When we excluded one trial with a short follow-up of eight hours, the mean difference further decreased (MD -0.09, 95% CI -9.89 to 9.71). Three trials (n = 753) compared NSAIDs to placebo regarding global improvement. We found low-quality evidence that NSAIDs are more effective than placebo with a risk ratio of 1.14 (95% CI 1.03 to 1.27). One trial (n = 214) studied the effect of NSAIDs on disability, finding very low-quality evidence that NSAIDs are no more effective than placebo on disability. Four trials (n = 967) comparing NSAIDs to placebo reported adverse effects, with low-quality evidence that the risk for adverse effects is higher in the NSAID group than in the placebo group (RR 1.40, 95% CI 1.02 to 1.93). The adverse effects reported in this review are consistent with those previously reported in the literature.

AUTHORS' CONCLUSIONS: This updated systematic review including 10 trials evaluating the efficacy of NSAIDs versus placebo or other drugs in people with sciatica reports low- to very low-level evidence using the GRADE criteria. The efficacy of NSAIDs for pain reduction was not significant. NSAIDs showed a better global improvement compared to placebo. These findings must be interpreted with caution, as the level of evidence according to the GRADE classification was very low for the outcome pain reduction and low for global improvement due to small study samples, inconsistent results, imprecision, and a high risk of bias in the included trials. While the trials included in the analysis were not powered to detect potential rare side effects, we found an increased risk for side effects in the short-term NSAIDs use. As NSAIDs are frequently prescribed, the risk-benefit ratio of prescribing the drug needs to be considered.

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