Abstracts

Efficacy of COX-2 selective NSAIDs, non-selective NSAIDs, and acetaminophen in osteoarthritis: A Bayesian mixed treatment comparison

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OBJECTIVE: To compare the efficacy of etoricoxib, lumiracoxib, celecoxib, non-selective (ns) NSAIDs and acetaminophen in the treatment of osteoarthritis. METHODS: RCTs investigating the effects of acetaminophen 4000 mg, diclofenac 150 mg, naproxen 1000 mg, ibuprofen 2400 mg, celecoxib 100–400 mg, lumiracoxib 100–400 mg, and etoricoxib 60 mg with a treatment duration of at least two weeks were identified with a systematic literature search. Endpoints of interest were pain, physical function and patient global assessment of disease status (PGADS). Pain and physical function reported on VAS or LIKERK scales were translated into effect sizes (ES). PGADS was reported on a 0–100 mm VAS scale. An ES 0.2–0.5 was defined as a “small” treatment effect, whereas ES of 0.5–0.8 and >0.8 were defined as “moderate” and “large”, respectively. Outcomes of all trials were analyzed simultaneously with a Bayesian mixed treatment comparison. A negative estimate indicates favourable outcomes. RESULTS: There is an 84% probability that etoricoxib 60 mg shows the greatest improvement in pain of all interventions compared, followed by diclofenac 150 mg (7% probability) and ibuprofen 2400 mg (4%). Etoricoxib 60 mg showed an ES of −0.62 (95% Credible Interval −0.78; −0.45) relative to placebo, an ES of −0.12 (−0.33; 0.07) relative to diclofenac 150 mg, and an ES of −0.21 (−0.50; 0.07) relative to ibuprofen. Regarding physical functioning, there is an 85% probability that etoricoxib 60 mg showed the greatest improvement, followed by diclofenac 150 mg (8% probability) and ibuprofen 2400 mg (4%). ESs of etoricoxib 60 mg relative to diclofenac 150 mg and ibuprofen 2400 mg were −0.12 (−0.34; 0.08), and −0.23 (−0.53; 0.06) respectively. The greatest improvements regarding PGADS were expected with diclofenac (29% probability) followed by etoricoxib (25%). CONCLUSION: The current study estimated the efficacy of acetaminophen, nsNSAIDs, and COX-2 selective NSAIDs in OA and demonstrated that etoricoxib 60 mg is likely to result in the greatest improvements in pain and physical function.

What happened to Vioxx users?

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OBJECTIVE: To understand the impact of the October 2004 withdrawal of rofecoxib on prescription analgesic use for arthritis patients who had been taking this medication. METHODS: Patients were selected from the MarketScan databases who, during January-September 2004, had a diagnosis of osteoarthritis on a medical claim and who filled prescriptions for at least 90 days of therapy with rofecoxib, an alternative COX-2 inhibitor (celecoxib), or a branded, non-selective, nonsteroidal, anti-inflammatory medication. RESULTS: Six RCTs were identified involving altogether 982 patients on the active treatment arms: adalimumab (n = 413), etanercept (n = 265) and infliximab (n = 304). All trials were placebo controlled, the primary follow-up time was 12–16 weeks and the primary outcome was ACR20. The NNTs (95% confidence intervals) for adalimumab, etanercept and infliximab were 2.6 (2.1–3.2), 2.1 (1.7–2.7) and 2.0 (1.7–2.4) to achieve ACR20 outcome and 2.9 (2.3–4.0), 2.2 (1.8–2.8) and 2.0 (1.6–2.4) to fulfill PsARC outcome, respectively. Indirect pairwise comparisons of TNF-alpha inhibitors yielded the RR of 0.87 (0.50–1.51) for adalimumab vs. etanercept, of 1.37 (0.72–2.61) for infliximab vs. etanercept and of 1.57 (0.87–2.86) for infliximab vs. adalimumab. CONCLUSION: Adalimumab, etanercept and infliximab are effective for the treatment of PsA. Both the NNTs and the responsiveness of the three drugs at PsARC or ACR20 outcomes are similar. Indirect comparison did not reveal significant difference in the efficacy among the TNF-alpha inhibitors in PsA.

The Effect of Hospital Volume on 30 Days Mortality Following Hip Fracture

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OBJECTIVE: The aim of our study was to examine the relationship between volume (annual number of patients) and outcome (30 days mortality) in patients with femoral neck fracture. METHODS: Data derived from the nationwide dataset of the National Health Insurance Fund Administration. Patients aged over 60 years with femoral neck fracture admitted to acute care hospital were included into the study. 30 days mortality following the primary surgical treatment was analyzed. We examined the relationship between volume (annual number of patients) and outcome (30 days mortality). First quintiles with similar patient number was applied (method I), than the patient number itself was the variable (method II). Several other covariates were included into the analysis: sex, age, co-morbidities, type and location of fracture, type of surgery (ostheosynthesis, arthroplasty), within 30 days complications, hospital type, day of surgery and surgical delay. The association between covariates was evaluated with logistic regression analysis (OR: odds ratio, 95% CI: confidence interval, p value). RESULTS: Altogether 3783 patient from 65 different hospitals were included into the study. The average 30 days mortality was 8.99 %, ranging between 7.82–10.0 % (method I). Using the volume data itself as continuous variable (method II), the connection between volume and outcome could not be proven (ORUnivariate = 0.998, CI: 0.9974–1.0005, p: 0.1779; ORMultivariate = 0.9987, CI: 0.9962–1.0013, p: 0.3378). We did not find any relationship between hospital volume and outcome in patients with femoral neck fracture. However it is important to highlight the role of hospital type, where treatment at medical university (medical school) is associated with significantly lower 30 days mortality. CONCLUSION: We would like to emphasize on the analysis of our nationwide dataset that initial treatment in high-volume hospitals was not associated with lower 30 days mortality. However, type of hospital (teaching status) seems to be more important predictor of 30 days mortality.