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References:

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Table 1. Effect of TNF inhibitor versus control on pain and grip strength

Figure 1. Distribution of comorbidities within each cluster using latent class analysis. Clusters were described as Healthier, Multimorbidity, B/N-mental, CVD and MetS. Black horizontal lines represent the prevalence of the comorbidity before the clusterization. Abbreviations: Healthier, lower prevalence of all comorbidities than average in the cohort; Multimorbidity, higher prevalence of all comorbidities, multiple comorbidities; B/N-mental, back/neck pain plus mental health (B/N-mental), cardiovascular disease (CVD), and metabolic syndrome (MetS) (Figure 1). Cox regression (HR [95CI%]) showed higher mortality risk for multimorbidity (3.76 [3.70-3.83]), CVD (1.56 [1.53-1.59]) and MetS (4.56 [4.35-4.78]), compared to healthy. No difference was observed for B/N-mental.

Table 1. Effect of TNF inhibitor versus control on pain and grip strength

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Efficacy of tumor necrosis factor inhibitors in hand osteoarthritis: a systematic review and meta-analysis of randomized controlled trials

M. Esteve1, F. Cicuttini1, M. Page1, A. Wluka2, Y. Wang1, 1Monash University, Epidemiology and Preventive Medicine, Melbourne, Australia

Background: Hand osteoarthritis (OA) is a leading cause of functional impairment associated with chronic pain and stiffness in hand joints (1). It is well documented that inflammation plays an important role in the pathogenesis of hand (2). Therefore, therapies targeting inflammation may offer a novel approach for the management of hand OA. Tumor necrosis factor (TNF) inhibitors are a class of anti-inflammatory drugs that have been used in musculoskeletal conditions (2-3).

Objectives: To examine the efficacy of tumor necrosis factor (TNF) inhibitors on symptoms and structural outcomes in hand osteoarthritis.

Methods: The study was carried out according to PRISMA protocol. Ovid Medline, Embase and Cochrane Central Registry of Controlled Trials were searched from inception to October 2021 for randomized controlled trials examining the efficacy of TNF inhibitors in hand osteoarthritis. We performed quantitative extraction of data and risk of bias assessment for the eligible studies. Where data were available, mean difference was calculated and random effect meta-analysis was performed. Quality of the evidence was assessed using GRADE criteria.

Results: Four studies were identified involving 276 participants in total. Three studies had low risk of bias and one study had some concerns. Meta-analysis showed that TNF inhibitors had no effect on pain at 4-6 weeks and 24-26 weeks and no effect on grip strength at 1 year (Table 1). There was no effect of TNF inhibitors on most of the clinical and structural outcomes. There was conflicting evidence for the effect of TNF inhibitors on radiographic progression, bone marrow lesion or erosive evolution at 12 months. Quality of evidence was low for the effect of TNF inhibitor on pain and moderate for grip strength.

Conclusion: Our systematic review found no effect of TNF inhibitors on clinical outcomes and the effect of TNF inhibitors on structural outcome over longer term is inconclusive. More clinical trials are needed to clarify the role of TNF inhibitors in the management of hand OA.

References:


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