Medical or Research Professionals/Clinicians

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SYSTEMATIC REVIEW AND META-ANALYSIS ON CERTOLIZUMAB PEGOL FOR RHEUMATOID ARTHRITIS IN ADULTS

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My abstract has been or will be presented at a scientific meeting during a 12 months period prior to EULAR 2017: No

Is the first author applying for a travel bursary and/or an award for undergraduate medical students?: No

Background: The appearance of tumor necrosis factor-alpha (TNFalpha) inhibitors dramatically changed the prognosis of rheumatoid arthritis. Certolizumab pegol (CZP) is a human Fab fragment of anti-TNFalpha monoclonal antibody which is approved for the treatment of rheumatoid arthritis. We performed a systematic review and meta-analysis, with Cochrane methodology, of the effects of CZP in rheumatoid arthritis.

Objectives: To assess the clinical benefits and harms of CZP in patients with rheumatoid arthritis.

Methods: We performed a search of electronic database (Cochrane Database, MEDLINE, EMBASE, Web of Knowledge and clinicaltrials.gov) until 26th September 2016. We searched for randomized controlled trials of CZP in rheumatoid arthritis compared to any other agent including placebo.

Results: 14 trials were included for the meta-analysis, 12 (5422 patients) in the pooled analysis for benefits and 14 (5499 patients) in the pooled analysis for safety. The overall possibility of bias seemed to be low but the quality of the evidence was low due to the risk of attrition bias.

With the approved dose - CZP 200 mg subcutaneous every other week with the first three doses of 400 mg - CZP showed statistically significant improvements at 24 weeks compared to placebo in: ACR50 absolute improvement 27% (95% CI 20% to 33%), RR 3.8 (95% CI 2.42 to 5.95) and NNT=4 (95%CI 3 to 8); DAS28 < 2.6 - original definition of remission - with RR 3.79 (95% CI 1.90 to 7.56); HAQ with -12% absolute improvement (95% CI -9% to -14%); and erosion score with -0.29% (95% CI -0.42% to -0.17%). There are also data available at 12 weeks with RR of 1.99 (95% CI 1.44 to 2.76) of achieving DAS28<2.6 with CZP 200 mg dose. The proportion of patients achieving DAS28<2.6 was still higher with CZP at 52 weeks with RR of 1.83 (95% CI 1.53 to 2.18). Serious adverse events were more frequent for CZP 200 mg dose with a RR of 1.47 (95% CI 1.13 to 1.91) and NNH of 32. There have been eight adverse events leading to death in CZP 200 mg group versus two in the control group (not statistically significant) and 10 patients developing tuberculosis versus two in the control group (not statistically significant).

Conclusions: There is low level evidence from randomized controlled trials that CZP as monotherapy or combined with methotrexate improved ACR50, DAS28, HAQ and joint damaged on x-ray. Adverse events were more frequent with active treatment.

Disclosure of Interest: None declared