[AB0343] TREATMENT OF RHEUMATOID ARTHRITIS PATIENTS WITH PARENTERAL STAPHYLOCOCCAL PROTEIN A (PRTX-100): AN OPEN-LABEL SINGLE-SITE EXTENSION TRIAL

C. Wiesenhutter[1,2]. [1]Rheumatology, Coeur d'Alene Arthritis Clinic, Coeur d'Alene; [2]Department of Family Medicine, University of Washington, Seattle, United States

Background: Staphylococcal protein A (SpA) is a bacterial B-cell superantigen that binds with high affinity to the Fc region of most immunoglobulins (Igs) and to the Fab framework region of Igs in the V_H3 gene family. PRTX-100, a highly purified form of SpA, has exhibited an acceptable safety profile when administered intravenously to small numbers of subjects at doses of up to 12 μg/kg.[1] SpA forms multimeric Ig complexes (MIgCs) with human antibodies which interact with and modulate cells of the monocytic lineage via FcR1 receptors.[2] However, the effects of SpA in rheumatoid arthritis (RA) are not fully understood.
Objectives: To expand the safety experience of parenteral PRTX-100 given to patients with RA, including retreatment. To describe PRTX-100 immunogenicity and pharmacodynamics as well as the feasibility of ultrasound joint count measurements.
Methods: This open-label trial enrolled 11 seropositive patients with RA who had previously participated in a Phase I trial[1] and responded (n=9) or had been given placebo (n=2). Patients were treated with 6 μg/kg PRTX-100 with four weekly intravenous infusions followed by five monthly infusions. Safety and disease activity were monitored monthly. Anti-PRTX-100 antibodies were measured. Patients were evaluated by standard clinical assessments and by ultrasound power Doppler joint counts (UPD).[3] Pharmacodynamic alterations in MIgC concentrations were assessed via cryoglobulin levels.
Results: The preliminary results indicated that PRTX-100 exhibited an acceptable safety profile. Adverse events (AEs) included fatigue (9% of patients), and headache (9%). Worsening of RA following initial infusions were observed in 82% of patients but diminished with subsequent infusions of PRTX-100. One patient discontinued therapy due to worsening of RA symptoms. One patient discontinued treatment due to perceived lack of improvement. No serious AEs were reported. At study day 196, 1 month after final infusion, all 11 patients demonstrated a reduction of DAS28CRP. There was a reduction in the UPD score of 26% ($p=0.0054$) and a correlation between the UPD and DAS28CRP of $r=0.630$ ($p<0.0001$). In addition, 55% of patients demonstrated increases in their MIgCs during treatment
Conclusions: Treatment with PRTX-100 in nine patients for the second time and two patients for the first time demonstrated an acceptable safety profile. A single subject discontinued the trial due to worsening of RA symptoms, although RA disease activity was improved in the majority of patients by the end of the study compared to baseline levels. Some subjects exhibited an increase in MIgCs after infusion of PRTX-100. The incorporation of ultrasound joint count methodology into small open-label trials might offer enhanced assessment of clinical efficacy.
References:

Wiesenhutter CW, et al. Arthritis Rheum 2014;#1487.
MacLellan LM, et al. Arthritis Rheum 2011;63:3897–907.
Kawashiri SY, et al. Rheumatology 2011;50:962–5.

Acknowledgement: C. Wiesenhutter Grant/research support from Protalex Inc.

Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2016-eular.2540

Citation: Ann Rheum Dis2016;75(Suppl2): 1019

Session: Rheumatoid arthritis - other biologic treatment