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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.5162

FRI0142

THE COMPARISON OF THE ULTRASONOGRAPHIC SYNOVIAL FINDINGS BETWEEN INTRAVENOUS ADMINISTRATION AND SUBCUTANEOUS INJECTION OF TOCILIZUMAB

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Background: Biologic disease-modifying anti-rheumatic drugs (bDMARDs) that target cytokines and cytokine receptors such as tumour necrosis factor (TNF) alpha and interleukin (IL) 6 have been established as a standard therapy in patients with rheumatoid arthritis (RA). Tocilizumab (TCZ) that targets IL-6 receptors has two administration routes such as intravenous administration (IV) or subcutaneous injection (SC). The effect of TCZ-SC therapy demonstrated comparable efficacy and safety to TCZ-IV therapy in clinical study.^{1,2} However, there have been no reports that evaluate the effect of TCZ-IV and SC for synovitis by imaging modality.

Objectives: The aim of this study was to compare the ultrasound findings between patients with rheumatoid arthritis (RA) treated by TCZ-IV and SC.

Methods: All patients with RA who treated with TCZ in Osaka City University RA registry (1140 patients with RA and 390 patients using bDMARDs) were included in this cross-sectional study. US examination was performed in MCP, PIP, wrist and MTP joints and finger flexor tendon and wrist extensor tendon, by using HI VISION Ascendus (Hitachi Medical Corporation, Japan) with a multifrequency linear transducer (18–6 MHz). The grey scale (GS) and power Doppler (PD) findings were assessed by the semi-quantitative method (0–3). GS score and PD score (both 0–156 points) were defined as the sum total of each score.

Results: We analysed total 76 patients who treated TCZ, 27 patients in IV group and 49 patients in SC group (mean age: 62.9±14.0 vs 66.0±13.2 years, p=0.343, mean duration of RA: 17.1±11.1 vs 13.7±12.3 years, p=0.218). The duration of TCZ use was significantly longer in IV (4.6±2.2 vs 3.0±2.4 years, p=0.004).

Clinically, DAS28-ESR improved from 5.3±1.5 at baseline to 2.4±1.1 at US examination in IV group, and it improved from 5.2±1.4 to 2.8±1.5 in SC group. US findings were not significantly differenced in both groups, GS score: 11.7±12.5 vs 10.9±9.6 (p=0.751), PD score: 5.3±8.1 vs 5.7±6.8 (p=0.832), max PD grade: 1.3±0.9 vs 1.4±0.9 (p=0.571) in IV and SC respectively.

Abstract FRI0142 – Table 1. The comparison of demographic and ultrasonographic findings between TCZ-IV and SC patients with rheumatoid arthritis.

	TCZ-IV group (n=27)	TCZ-SC group (n=49)	P value
Age (years old)	62.9±14.0	66.0±13.2	0.343
Disease duration (years)	17.1±11.1	13.7±12.3	0.218
Duration of TCZ use (years)	4.6±2.2	3.0±2.4	0.004
DAS28-ESR at baseline	5.3±1.5	5.2±1.4	0.780
DAS28-ESR at ultrasound examination	2.4±1.1	2.8±1.5	0.175
CDAI at baseline	21.8±14.5	22.8±14.4	0.787
CDAI at ultrasound examination	7.3±5.9	10.6±10.4	0.082
Total GSUS score	11.7±12.5	10.9±9.6	0.751
Total PDUS score	5.3±8.1	5.7±6.8	0.832
Maximum PDUS grade	1.3±0.9	1.4±0.9	0.571

Conclusions: We compared the ultrasound findings between patients with RA treated by TCZ-IV and SC. Ultrasound findings between IV and SC were not significantly differenced. Both administration routes of TCZ are effective for the treatment in patients with RA.

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Acknowledgements: We wish to thank Tomoko Nakatsuka for clinical assistant, Setsuko Takeda, Emi Yamashita and Yuko Yoshida for their special efforts as a sonographer and collecting data.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.1851

FRI0143

INFLUENCE OF LOW-DOSE GLUCOCORTICOID TREATMENT ON PERSISTENCE ON BIOLOGIC DMARDS THERAPY: REAL-LIFE DATA FROM THE ITALIAN GISEA REGISTRY

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Background: The use of glucocorticoid (GC) in Rheumatoid arthritis (RA) is recognised by the current treatment approach as a valid adjunct to DMARDs therapy. Despite its efficacy, safety of GC is still an issue and the best strategy of use is still debated, including patients under bDMARDs therapy

Objectives: To analyse in RA the differences of GC users versus non-users of baseline features, response to therapy and persistence in bDMARDs from the Italian biologics registry GISEA (Italian Group for the Study of Early Arthritis)

Methods: Consenting patients satisfying 1987 or 2010 ACR criteria for RA included in the Italian GISEA registry were enrolled. Data recorded comprehend demographic and clinimetric variables. Data are collected at baseline and 6 monthly during follow-up. To be included in the study patients needed a minimum follow-up time of 12 months and if data were not updated after 2012 patients were considered lost to follow-up. EULAR and HAQ responses were calculated. Statistical analysis included descriptive measures, parametric and nonparametric comparisons between groups and univariate analysis of survival on therapy

Results: A total of 8545 patients were enrolled, of them 4193 (49%) using a variable dose of GC. In 3035 (72%) the dose was ≤5 mg. Baseline demographic and disease-specific features at the start of bDMARD therapy were not different between GC users and non-users, both in 1 st and 2nd line bDMARDs RA patients. EULAR response rates were generally better in GC users at 6 and 12 months, but without statistical significance: good/moderate EULAR responses at 6 months were attained in 76.5% of GC users versus 67% in non users, while at 12 months in 81.5% vs 73% respectively (both Ps not significant). Similarly, HAQ responses (<0.5) were slightly better in users vs non users at 6 (42.5% vs 37.4%) and 12 months (46.5% vs 42%) but again without statistical significance. Finally, mean survival on bDMARDs therapy after 2 years was significantly influenced by GC with better survival curves in steroid-treated patients (55.8% vs 47%, p<0.001). This difference was also maintained subanalysing patients in 1 st or 2nd bDMARD lines of therapy (56.2% in users vs 48% in non users in 1 st line and 55.3% vs 45.9% in 2nd line, both Ps <0.001).

Conclusions: Our data show that GC are used in a high percentage of RA patients on bDMARD therapy. GC significantly improve the persistence on bDMARDs therapy in 1 st and 2nd line. No obvious other differences are evident in baseline, EULAR and HAQ response rates. This fact should be kept in mind when evaluating the persistence on bDMARD treatment reported in different registries. Safety evaluations in individual patients should be further analysed to guide the use of GC in this setting

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.4321

FRI0144

PATIENT-REPORTED OUTCOMES WITH SARILUMAB IN PATIENTS WITH RHEUMATOID ARTHRITIS ARE SIMILAR REGARDLESS OF PRIMARY OR SECONDARY FAILURE WITH TUMOUR NECROSIS FACTOR INHIBITORS

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Background: Sarilumab is a human monoclonal antibody that binds membrane and soluble IL-6 and was recently approved for the treatment of moderate-to-severe rheumatoid arthritis. Among inadequate responders to a TNF inhibitor (TNFi), patients may respond differently to sarilumab depending on whether they had a primary (1st) failure or initially responded but then subsequently lost response (secondary [2nd] failure).