(43.4%) biologic-failure pts had received 1, and 948 (56.6%) had received ≥ 2 previous biologics. Baseline characteristics in biologic-naïve and biologic-failure pts, respectively, were: mean (SD) age 59.9 (12.7) and 56.9 (12.5) years; RA duration 7.2 (8.22) and 12.1 (9.13) years; 496 (73.7%) and 1379 (82.2%) were women; 621 (92.3%) and 1552 (92.5%) had received prior MTX; and 533 (79.2%) and 1386 (82.6%) had received corticosteroids. Over 2 years, 195 pts switched from IV to SC abatacept (57 biologic naïve, 138 biologic failure; Fig.). Reasons for switching were available for 172 pts (51 biologic naïve, 121 biologic failure; some had >1 reason); biologic naïve/biologic failure: pt wish 54.9%/62.0%, physician choice 31.4%/19.8%, safety 5.9%/9.9%, remission/major improvement 3.9%/5.0%, poor compliance 0%/4.1%, lack of efficacy 2.0%/3.3%, surgery 2.0%/0.8%, weight adjustment 2.0%/0%, other 49.0%/36.4%. Only eight pts (2.6%) re-switched to IV abatacept (2 biologic naïve, 6 biologic failure). Reasons for re-switching were: pt wish (n=4), lack of efficacy (n=4), safety issue (n=1) and other (n=2).

Figure. Patients Who Switched From IV to SC Abatacept Over 2 Years (Kaplan-Meier Analysis)

Conclusions: Less than 5% of pts who switched formulation from IV to SC abatacept in real-world clinical practice re-switched to the IV formulation, suggesting that switching has no adverse clinical impact. A change in formulation was mainly due to pt wish, reflecting their involvement in decision-making.

References:

- [1] Keystone EC, et al. *Ann Rheum Dis* 2012;71:857–61.
- [2] Mueller R, et al. *Arthritis Rheumatol* 2015;67(Suppl. 10):651–52.
- [3] Reggia R, et al. *J Rheumatol* 2015;42:193–5.
- [4] Monti S, et al. *J Rheumatol* 2015;42:1993–4.
- [5] Alten R, et al. *Ann Rheum Dis* 2016;75(Suppl. 2):202.

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AB0413 INDUCTION AND PROGRESSION OF SUBCUTANEOUS NODULOSIS IN RHEUMATOID ARTHRITIS PATIENTS TREATED WITH TOCILIZUMAB

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Background: Tocilizumab (TCZ) is a monoclonal antibody (moAb) directed against the IL-6 receptor approved for moderate-to severe rheumatoid arthritis (RA) treatment. Some authors have reported a beneficial effect of TCZ in preventing lung and subcutaneous nodulosis in RA patients. On the contrary, to our knowledge no data concerning the acceleration of subcutaneous nodulosis under TCZ therapy are currently available.

Objectives: We report a small case series of 5 RA patients experimenting an evident worsening of subcutaneous nodulosis during the treatment with intravenous tocilizumab.

Methods: Our cohort included 5 patients (1 male and 4 females, mean age $\pm$ Standard Deviation (SD) 64 $\pm$ 10.6 years, mean disease duration $\pm$ SD 21.8 $\pm$ 10.9 years). Four patients were rheumatoid factor and anti-citrullinated peptide antibodies positive. Each patient had been previously treated with several conventional and biologic drugs. At the time of observation, three subjects were practicing methotrexate (MTX), two patients were taking hydroxychloroquine (HCQ) and one patient was taking prednisone. Intravenous tocilizumab 8 mg/kg every 4 weeks was administered for a mean $\pm$ SD of 43.4 $\pm$ 32.4 months, with

a good disease control in 3 cases. All the patients had a previous history of subcutaneous nodulosis that considerably worsened during the treatment with tocilizumab. Patients experimented the development of new subcutaneous nodules localized at the fingers, elbows or the inframammary fold, tending to ulceration. The management of this medical event included the tapering of MTX, the administration of steroids, the addition of HCQ, the use of antibiotics and surgery. However, neither pharmacological nor surgical treatment was completely effective, as nodules tended to recur and to increase in number and dimensions.

Results: To our knowledge this is the first report describing an accelerated subcutaneous nodulosis in a small cohort of RA patients treated with tocilizumab.

Disclosure of Interest: None declared

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AB0414 THE USE OF RITUXIMAB IN PATIENTS WITH RHEUMATOID ARTHRITIS: IN WHICH INFUSION INTERVALS WERE GIVEN AND HOW DID THEY RESPOND? HUR-BIO REAL LIFE RESULTS

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Background: Rituximab is one of the treatment options in rheumatoid arthritis (RA) patients and officially recommended as a maintenance treatment given every 6 months after the initial loading of first course.

Objectives: In this real life study, it was aimed to investigate the infusion frequency of rituximab maintenance treatment and possible effects on disease activity.

Methods: The HUR-BIO is a single-center biologic registry of Hacettepe University which is established in Ankara and in which patients have been prospectively recorded since 2012. This database has 1235 RA patient records as of August 2016. Rituximab was prescribed at least once in 273 (22.1%) patients. The residence address of 85 those patients was within the boundaries of center city (Ankara) and they were included in to the study. In our clinic, the dates and the DAS-28 scores at the time of rituximab courses were recorded. Rituximab infusion compliance was classified as; "regular" if there is less than one month delay, "slightly irregular" if less than 3 months delay and "irregular" if more than 3 months delay.

Results: The mean age of the 85 patients (80% female) was 59.1 (10.1), the mean disease duration was 12.9 (8.6) years and 74.1% of patients were seropositive. 39/85 (46%) patients previously used at least one biological agent (46 (54%) patients were biologic naïve before Rituximab therapy). Median rituximab course number was 3 (1–8). A total of 211 rituximab courses were given to 85 patients. Rituximab course number and percentage is shown in figure. The mean interval time between rituximab courses was 7.9 (2.8) months. Total of 102 (52.6%)

courses were administered at normal times regularly, 60 (30.9%) were slightly irregular and 32 (16.5%) were irregular. There was no significant difference between the mean DAS-28 responses in the time of the courses and the rituximab infusion compliances [in regular group mean DAS-28 was 3.31 (1.19), in slightly irregular group mean DAS-28 was 3.26 (1.35) and irregular group mean DAS-28 was 3.57 (1.34), $p > 0.05$]. Before rituximab courses, 33.7% of patients had remission, 19.1% had low disease activity, 36.3% had moderate disease activity and 10.9% had high disease activity.

Conclusions: Rituximab administration was approximately 2 months delayed in RA patients who were living in center-city boundaries. The pre-treatment mean disease activity scores were similar, even if there was a delay in rituximab administration. In our center, about 85% of patients were taking RTX courses regular and/or slightly irregular and about half of the patients before treatment were in remission and/or low disease activity.

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AB0415 TENDENCY TO CHOOSE FIRST BIOLOGIC AGENT THERAPY OF RHEUMATOID ARTHRITIS IN THE ELDERLY: RESULTS FROM JAPANESE MULTICENTER REGISTRY

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Background: Of the treatment of rheumatoid arthritis (RA), biologic agent therapies are chosen, if disease activity remains moderate or high despite csDMARDs therapy. In the elderly, with comorbidity and their less spare ability, safety is often concerned in the choice of biologic agent.

Objectives: We investigated the tendency to choose biologic agent and drug continuation rates in elderly in last decade.

Methods: Records of relevant patients with RA were collected from the Tsurumi Biologic Communication Registry, wherein the department of Nagoya University and 20 affiliated hospitals in Japan are enrolled. A total of 873 biologics-naïve and age 65 and older patients were recruited from January 2004 to December 2014. We studied the choice of the biologic agent year by, and baseline disease activity and concomitant methotrexate (MTX) among TNF inhibitors, tocilizumab (TCZ), and abatacept (ABT) groups. Drug continuation rates were compared among TNF inhibitors, TCZ, and ABT groups.

Results: From 2005 to 2010, etanercept (ETN) was used the most (2007; 73.5%, 2009; 65.9%). After the advent of ABT, ABT was used the most (2011; 44.3%, 2014; 38.8%).

Baseline disease activity slightly decreased as a whole (DAS28-CRP; 4.88 to 4.44). Despite baseline disease activity of TNF inhibitors group decreased (DAS28-CRP; 4.88 to 4.37), that of TCZ group increased (DAS28-CRP; 4.94 to 6.24).

In 2011–2014, baseline disease activity of TCZ group (5.85) was higher than that of TNF inhibitors group (5.11) ($p < 0.05$). Concomitant MTX rate and dose were lower in ABT group (40.2%, 7.6mg) than that of TNF inhibitors group (79.0%, 8.9mg). 2 years drug continuation rate due to all unfavorable causes; ABT group was 92.4%, better than that of TNF inhibitors 87.1% and TCZ 69.2% ($p < 0.05$). 2 years drug continuation rate due to adverse events; TCZ group was 80.8%, lower than that of TNF inhibitors 94.6% and ABT 96.2% ($p < 0.05$).

Figure 1. Changes of biologic agent from 2004 to 2014 (IFX:infliximab, ETN: etanercept, ADA: adalimumab, TCZ:tocilizumab, ABT:abatacept, GLM: golimumab, CZP:certolizumab pegol)

Conclusions: ETN was used most before the advent of ABT. After the advent of ABT, ABT was used most and ETN decreased. This selection was made for speculation that ABT is lower risk than other biological agents. Baseline disease activity slightly decreased showing that tight control management became also popular among elderly. In 2011–2014, concomitant MTX rate and dose were lower in ABT group, but 2 years drug continuation rate was the highest.

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AB0416 WHICH FACTORS PREDICT THE RESPONSIVENESS TO TOCILIZUMAB IN RHEUMATOID ARTHRITIS? THE DIFFERENCE BETWEEN THE USAGE AS THE FIRST BIOLOGIC AND AS THE SECOND BIOLOGIC

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Background: Although recent development of a variety of biologics has dramatically improved treatment for rheumatoid arthritis (RA), it is still unclear which biologics is better for use in each patient. Some previous studies have shown the predictive factors for good response (GR) to tocilizumab (TCZ), including low HAQ, high DAS28¹⁾, low levels of serum soluble IL-6 receptor²⁾, and low numbers of previous use of other biologics³⁾. However, the consensus is not immediately available.

Objectives: To compare continuation rates (CR) of TCZ by the responsiveness to the therapy and to identify predictive factors for GR to TCZ in RA.

Methods: Patient with RA who newly started receiving TCZ after April 2008 in our hospital, were included in the study. We collected patient records, medication histories, laboratory data, and clinical parameters longitudinally after starting TCZ. Statistical analyses were performed using the chi-square test, binomial logistic regression analysis, Kaplan-Meier method, and the log-rank test.

Results: Ninety-two patients were included in the study. The mean age and disease duration at baseline were 60.0±13.5 years and 8.7±8.0 years, respectively. The seroprevalence of the anti-cyclic citrullinated peptide antibody and the rheumatoid factor were 95.4% and 95.7%, respectively. The rate of methotrexate and prednisolone at baseline were 45.7% and 64.1%, respectively. TCZ was administered as the first biologic in 42 patients, and as the second biologic in 33. DAS28(ESR) and CDAI revealed high disease activity at baseline (5.2±1.5 and 25.4±14.1, respectively). The mean CR of all patients was 42.1±4.0 months. The CR was significantly higher in patients who achieved GR in EULAR response criteria at 6 months after starting TCZ than those who did not achieve GR (54.0±6.0 months vs 29.0±5.3 months, $p = 0.004$). Multivariate statistical analysis revealed two predictive factors for achieving GR at 6 months after starting TCZ, the low number of previous use of other biologics and the low CDAI at baseline ($p = 0.018$, odds ratio (OR) = 0.386, and $p = 0.011$, OR = 0.944, respectively). We divided the patients into two groups, patients using TCZ as the first biologic and patients using it as the second biologic. Univariate statistical analyses revealed low usage rate and dose of prednisolone (PSL) and low serum creatinine level at baseline as the predictive factors for achieving GR in patients using TCZ as the first biologic, and low DAS28(ESR), CDAI and HAQ-DI in the patients using TCZ as the second biologic. By multivariate statistical analysis, we identified the low CDAI as a predictive factor in the patients using TCZ as the second biologic.

Conclusions: RA patients who achieved GR at 6 months after starting TCZ showed higher CR than the others. This study also suggests that low number of biologics usage and low CDAI at baseline are the predictive factors for GR. The history of biologics usage may be important to identify the predictive factors for GR to TCZ.

References:

- [1] Ann Rheum Dis 2011;70:1216–22.
- [2] Ann Rheum Dis 2014;73:945–7.
- [3] Pharmacological Research 2016;111:264–71.

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