Clinical Immunology, Saitama Medical Centre, Saitama Medical University, Kawagoe, ⁷Department of Internal Medicine, Fukushima Red-Cross Hospital, Fukushima, ⁸Department of Rheumatology, Shimane University Faculty of Medicine, Izumo, ⁹Department of Clinical Immunology and Rheumatology, Hiroshima University Hospital, Hiroshima, ¹⁰Institute of Rheumatology, Tokyo Womens Medical University, ¹¹Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, ¹²Institute of Rheumatology, Tokyo Women's Medical University, ¹³Department of Allergy and Rheumatology, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan

Background: Feasibility of discontinuation of biologic agents in patients with rheumatoid arthritis (RA) who have reached stable remission has been investigated. Although evidence has been accumulating regarding tumour necrosis factor inhibitors, the possibility of tocilizumab-free strategy is still unclear.

Objectives: To evaluate the sustained remission and low disease activity after discontinuation of tocilizumab in patients with RA who were treated with tocilizumab alone or in combination with methotrexate.

Methods: The SURPRISE study was a 2 year randomised, controlled study. Patients with active RA despite methotrexate were randomised to tocilizumab added to methotrexate (ADD-ON) or switch to tocilizumab alone (SWITCH). At week 52, tocilizumab was discontinued in patients who achieved remission based on disease activity score for 28 joints (DAS28-ESR<2.6). The endpoints of the second year included tocilizumab-free sustained remission rates at week 104, sustained low disease activity rates, radiological outcomes assessed with the modified total Sharp score (mTSS), and safety. The efficacy of re-instituted tocilizumab/methotrexate was also assessed.

Results: 105 patients who achieved remission at 52 week discontinued tocilizumab; 51 in the ADD-ON continued methotrexate and 54 in the SWITCH were observed without medication. Whereas sustained DAS28 remission rates at week 104 were 24% for the ADD-ON and 14% for the SWITCH ($p=0.29$), sustained low disease activity rate was significantly higher in the ADD-ON than in the SWITCH (55% vs 27%, $p=0.005$, figure 1). Radiographical progression was comparable in the 2 groups (mTSS; 0.37 vs 0.64, $p=0.36$). Re-start of tocilizumab induced remission in all patients except two irrespective of concurrent methotrexate after 36 weeks while re-start of methotrexate was effective only in a half of patients.

Tocilizumab-free low disease activity

Abstract OP0111 – Figure 1 Tocilizumab-free low disease activity

Conclusions: Sustained low disease activity after tocilizumab discontinuation could be maintained with continued methotrexate in more than half of patients. Re-treatment with tocilizumab led remission in more than 90% patients.

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OP0112 THERAPEUTIC DRUG MONITORING TO OPTIMISE SWITCHING BETWEEN BIOLOGIC AGENTS IN RHEUMATOID ARTHRITIS

M.J. l'Ami¹, J. Ruwaard¹, C.L. Kriekkaert¹, M.T. Nurmohamed^{1,2}, T. Rispens^{3,4}, G. Wolbink^{1,3}. ¹Amsterdam Rheumatology and immunology Center, location Reade; ²Amsterdam Rheumatology and immunology Center, location VU University Medical Center; ³Landsteiner Laboratory, Academic Medical Center; ⁴Immunopathology, Sanquin, Amsterdam, Netherlands

Background: Many patients with rheumatoid arthritis (RA) are treated with tumour necrosis factor inhibitors (TNFi). It is, however, unclear whether to switch to a second TNFi or to another mode of action drug in case of non-response. The detection of anti-drug antibodies (ADAs) have shown to be related to the response rate of a second TNFi.¹ The detection of ADAs is, however, to a large extent dependent of the type of assay used and, moreover, the efficacy of the drug is determined by the pharmacokinetics. Therefore, it more logical to use drug levels in daily clinical practice.

Objectives: To investigate whether serum drug concentration of patient's first TNFi, adalimumab, was related to the effectiveness of a second TNFi, etanercept.

Methods: Consecutive patients with RA treated with etanercept were followed in the Reade Rheumatology Registry, an observational cohort (NTR no.6868). Patients who were treated with adalimumab 40 mg every other week previously (switchers; n=69) were compared to patients starting etanercept without prior biologic agents (biologic-naïve; n=380). Patients received etanercept 50 mg weekly or 25 mg twice a week. Switchers were divided into three groups; respectively low- (<0.5 µg/mL), intermediate- (0.5 and 5.0 µg/mL) and high- (>5.0 µg/mL) adalimumab concentration. The last available serum sample before adalimumab discontinuation was assessed for adalimumab concentrations by enzyme linked immunosorbent assay (ELISA). ADAs were measured using the antigen binding test (ABT). Clinical endpoints were percentage of patients achieving European League Against Rheumatism (EULAR) good or moderate response and the Simplified Disease Activity Index remission criteria (SDAI <3.3) after 52 weeks.

Results: Median (IQR) adalimumab concentration of the switcher-groups with low (n=18), intermediate (n=18) and high concentrations (n=27) were, respectively 0.0 µg/mL (0.0–0.05), 2.5 µg/mL (1.5–4.3) and 7.4 µg/mL (6.0–11.8). ADAs were detected in, respectively 16 patients (89%), 6 patients (33%) and 3 patients (11%). Response rate of switchers with low adalimumab concentrations was

comparable to biological-naïve patients, whereas switchers with intermediate and high concentrations responded worse regarding EULAR response criteria (respectively 74%, 72%, 50% and 52%; figure 1A) and SDAI remission (respectively 27%, 27%, 6%, 11%; figure 1B).

Conclusions: For the first time, we showed that the response rate of switchers with low adalimumab concentrations was comparable to biological-naïve patients, whereas switchers with intermediate and high concentrations responded worse. Therefore, drug concentration assessment may optimise switching, as it helps to identify those patients that may benefit from a second TNFi.

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OP0113

GRADUAL TAPERING TNF BLOCKERS VERSUS CONVENTIONAL SYNTHETIC DMARDS IN PATIENTS WITH RHEUMATOID ARTHRITIS IN SUSTAINED REMISSION: FIRST YEAR RESULTS OF THE RANDOMISED CONTROLLED TARA-STUDY

E. Van Mulligen¹, A. E. A.M. Weel^{1,2}, T.M. Kuijper², J.J. Luime¹, J.M.W. Hazes¹, P.H.P. de Jong^{1,2}. ¹Rheumatology, Erasmus MC; ²Rheumatology, Maasstad hospital, Rotterdam, Netherlands

Background: Clinical and radiographic outcomes in rheumatoid arthritis (RA) have improved enormously in the last two decades, due to early detection of the disease, early initiation of 'intensive' therapy and a treat-to-target approach. As a result, 50%–60% of early RA patients will achieve sustained remission during the first year of follow-up. In aforementioned cases current guidelines recommend to consider tapering treatment, but an optimal approach to gradually de-escalate conventional synthetic or biologic DMARDs (respectively csDMARDs and bDMARDs) is currently lacking.

Objectives: The aim of this study is to evaluate the effectiveness of two tapering strategies, namely gradual tapering of csDMARDs and anti-TNF therapy during one year of follow-up.

Abstract OP0113 – Figure 1 (A) Baseline characteristics and results after 12 months of follow-up of both tapering groups. (B) Cumulative flare over time, error bars indicate 95% confidence intervals. (C) Treatment at 12 months. Columns indicate the percentage of patients that tapered medication until the indicated amount of the original dose. (D) Mean DAS over time, error bars indicate 95% confidence intervals. (E) Mean HAQ over time, error bars indicate 95% confidence intervals. Abbreviations: ACPA; anti-citrullinated protein antibody, csDMARDs; conventional synthetic DMARDs, DAS; disease activity score, HAQ; health assessment questionnaire, RF; rheumatoid factor.

Methods: In this multicenter single-blinded randomised controlled trial RA patients in sustained remission for at least 3 consecutive months, defined as a DAS₂₈≤2.4 and a swollen joint count (SJC)≤1, which was achieved with csDMARDs and a TNF blocker were included. Eligible patients were randomised into gradual tapering csDMARDs followed by the TNF blocker or vice versa. Medication was tapered in three steps over the course of 6 months. Gradual tapering was done by cutting the dosage into half, a quarter and thereafter it was stopped. The primary outcome for the clinical effectiveness was disease flare defined as DAS44 >2.4 and/or SJC>1. Secondary outcomes were quality of life and functional ability.

Results: A total of 187 patients were randomly assigned to tapering csDMARDs (n=93) or tapering anti-TNF (n=94). Patients had an average symptom duration of 6.7 years and were predominantly female (66%) with an average age of 56.4 years (figure 1A). The cumulative flare ratio in the csDMARD and anti-TNF tapering group was respectively 32% and 41% (figure 1B), which corresponds with a hazard ratio of 0.91 (95% CI: 0.68 to 1.22, p=0.55). In the last 3 months the increase in cumulative flare ratio differs the most between the two groups. On the other hand, in 48% and 51% of patients respectively tapering csDMARDs or anti-TNF the medication could be completely withdrawn (figure 1C). Percentages of patients which are not completely tapered are higher than the flare ratios, due to loss of remission without a disease flare. Furthermore, mean DAS and mean HAQ over time, and after 1 year, did not differ between both tapering groups (figure 1D and E).

Conclusions: There were no significant differences in flare ratios, disease activity and functional ability between both tapering strategies during the first year of follow-up. Therefore, in RA patients who are in sustained remission we advise to taper anti TNF first, but before tapering therapy rheumatologists should take the risk of a disease flare and patient's wishes into account.

Disclosure of Interest: None declared

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OP0114

ANA DEVELOPMENT IS ASSOCIATED WITH POOR RESPONSE TO BIOLOGICAL DISEASE-MODIFYING ANTI-RHEUMATIC DRUGS IN PATIENTS WITH RHEUMATOID ARTHRITIS

Y. Ishikawa¹, M. Hashimoto², H. Ito^{2,3}, M. Tanaka², N. Yukawa⁴, T. Fujii⁴, T. Mimori⁵, C. Terano⁶. ¹Immunobiology Section, Joslin Diabetes Center/Harvard Medical School, Boston, USA; ²Department of Advanced Medicine for Rheumatic Diseases; ³Department of Orthopedic Surgery, Graduate School of Medicine, Kyoto University, Kyoto; ⁴Department of Rheumatology and Clinical Immunology, Graduate School of Medicine, Wakayama University, Wakayama; ⁵Department of Rheumatology and Clinical Immunology, Graduate School of Medicine, Kyoto University, Kyoto; ⁶Center for Investigative Medical Sciences, RIKEN, Yokohama, Japan

Background: It has been well known that anti-TNF-α treatment for patients with rheumatoid arthritis (RA) is associated with anti-nuclear antibody (ANA)