standing RA patients. It is very important to set treatment goal for those management.

Objectives: The purpose of this study is to set treatment target using Timed Up and Go test (TUG) in relation to achievement of HAQ-DI remission (HAQ-DI <0.5) with joint surgery in lower limbs.

Methods: Multicenter prospective observational cohort study was conducted among patients who underwent elective joint surgery for RA from April 2012 to March 2016 (Study registration: UMIN000012649). In this study, we collected data including age, sex, disease duration, drug therapies, and disease activity (DAS), TUG, and patient-reported outcome [HAQ-DI, EQ-5D (QOL), patient's global assessment (PtGA) and BDI-II (depression)] at baseline and at 6 or 12 months after the surgery. Association between TUG and achievement of HAQ remission and cut-off values for HAQ remission were also determined using logistic regression analysis with adjustment of age and sex and ROC curve, respectively.

Results: Totally, 139 patients with elective joint surgery in lower limbs were analysed. Mean age, disease duration, HAQ-DI and TUG were 65.4 years, 17.5 years, 1.022, and 12.7 s, respectively. Performed joint surgeries were total hip arthroplasty; 10.1%, total knee arthroplasty; 33.8%, total ankle arthroplasty or ankle fixation; 10.1%, and forefoot arthroplasty; 46.0%. The surgeries can significantly improve the outcome measures, including TUG, DAS, PtGA, pain, EQ-5D and BDI-II other than HAQ-DI. In this study, 45 of 139 patients (32.4%) had HAQ remission status at baseline. 18 of 94 patients (19.1%) who had HAQ-DI >0.5 can achieve HAQ remission with the surgery. Notably, TUG at last observation was significantly associated with achievement of HAQ remission even after adjustment for age, sex, and DAS (1 s increasing of TUG. OR:0.72, 95% CI: 0.53–0.97). The adjusted-TUG at last observation of patients with achievement of HAQ remission was 9.2 s (95% CI: 5.6–12.8) (figure 1). Cut-off of TUG at observation for achievement of HAQ remission was 9.2 s based on ROC analysis (figure 2). Importantly, We confirmed significant more improving of EQ-5D, HAQ-DI and TUG in patients who achieved TUG 9.2 s at last observation than in patients who did not (figure 3).

Abstract AB0314 – Figure 1

Conclusions: TUG was significantly associated with PRO; HAQ-DI and EQ-5D. The cut-off values of TUG (9.2 s) should be important to achieve good QOL and physical function for patients with joint surgery in lower limbs and could be suitable target for surgical procedure.

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Disclosure of Interest: None declared

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AB0315 HIGH DISEASE ACTIVITY AT BASELINE, NOT RF NOR ACPA STATUS, PREDICTS INADEQUATE RESPONSE TO METHOTREXATE (MTX) IN PATIENTS WITH EARLY RHEUMATOID ARTHRITIS IN REAL WORLD: A SINGLE CENTRE COHORT IN JAPAN

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Background: In 2016 update of the EULAR recommendations for management of rheumatoid arthritis (RA), the poor prognostic factors include moderate to high disease activity according to composite measures and presence of Rheumatoid

factor (RF) and/or anti-citrullinated peptide antibodies (ACPA), especially at high levels.

Objectives: In this retrospective study, we investigated the association between baseline clinical prognostic factors and inadequate response to methotrexate for early RA in clinical practice.

Methods: Patients aged 18 years or over whose date of clinical onset of RA was within the previous 12 months to the first visit to our hospital from 2009 to 2016, who had at least 6 months of follow-up data and composite measure score (DAS-SER, DAS-CRP, SDAI, CDAI) recorded at 12 months from MTX treatment were included. Data collected included baseline demographics, rheumatoid factor (RF), ACPA status and the level of its titer, time from symptom onset to treatment and disease activity at baseline. In this study, we define that it was inadequate response to MTX (MTX-IR) when the patient didn't achieve low disease activity in at least three of four composite measures at 12 months after treatment, or was stopped to treat due to any reason or added biologic DMARDs (bDMARDs) in the observation period. Univariate and multivariate logistic regression of Inadequate response to MTX at 12 months after were performed.

Results: Data from 486 patients treated with MTX of 571 started to treat as early RA were analysed: 72.0% female; mean age 59.6 years (SD: 14.4); time from symptom onset to treatment is 7.3 months (SD 10.5); 66.1% RF-positive, 66.9% ACPA-positive. The number of patients is 138 (45.8% of ACPA positive) whose ACPA is in the higher level, over 150IU/ml. 411 patients were initially treated with MTX, and 75 were initially treated with other csDMARDs but added or changed to MTX within 1 years after treatment. Concomitant rate of corticosteroid at the start of MTX was 41.5% and mean dose of prednisolone was 5.7 mg/day. 270 (55.6%) patients were MTX-IR in 12 months after treatment. There is no significant difference between the dose of MTX at start in MTX-IR patients and that in others (6.70 versus 6.69 mg/week, respectively) but the dose at 12 months after treatment was 8.29 mg/w in MTX responders and significantly lower than that of MTX-IR, 8.68 mg/dl (p<0.05). The strongest baseline predictor of Inadequate response were Low disease activity at baseline, but there was no statistically significant association with sex, age at onset, RF or ACPA status additionally the level of its titers.

Conclusions: In this observational study, patients with early RA at risk of inadequate response to MTX include only with high disease activity at baseline, and the level of ACPA titers or other baseline characteristics don't predict it.

Disclosure of Interest: None declared

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AB0316 IS THERE A NEED TO RELOOK AT THE CUT OFFS OF RHEUMATOID FACTOR IN INDIAN POPULATION ?

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Background: Population specific cut offs of titers of Rheumatoid Factor (RF) in diagnosis of Rheumatoid arthritis (RA) and the role of anti citrullinated peptide antibodies (ACPA) remains unknown.

Objectives: To define cut offs for RF titres in diagnosis of RA in Indian population
Methods: RF titers of consecutive adult RA patients fulfilling ACR 1987 as well as ACR/EULAR 2010 criteria were compared with healthy normal and diseased non RA controls encountered in the rheumatology OPD of a tertiary care Armed forces Hospital using ROC-AUC analysis. Reclassification of disease phenotype as seropositive and seronegative RA using various the cutoffs was looked into and corresponding Anti-CCP titers in the subset of patients with RA was analysed.

Results: Overall 589 cases of RA (range: 18–69 years; 29.9% Females) were compared with age and sex matched 192 non RA and 51 controls. Mean (+SE) RF titers in RA cases was 107.7 IU/L (+ 6.17) while that in non RA disease cases was 29.3 IU/L (+ 6.08) and normal healthy controls 14.7 IU/L (0.43). ROC analysis revealed a cutoff titer of 20.3 IU/L (AUC 0.705 (95% CI: 0.66–0.74)) with the best combination of sensitivity and specificity for a diagnosis of RA from non RA and healthy controls. With the currently used cut offs of 60 IU/L in our centre as well as high titre RF as per ACR/EULAR 2010 criteria, subjects were seropositive in 286/589 (48.5%) cases. Cutoffs of 40 IU/L and 20 IU/L led to a label of seropositivity in 322 (54.7%) and 396 (67.2%) cases respectively. Simultaneous Anti-CCP was done in 480 (81.4%) cases: 363 (75.6%) of these were positive. Using a cutoff of 60 IU/L as seropositive RA, anti CCP positivity was noted in 246/286 (86%) cases while with a cutoff of 40 IU/L and 20 IU/L it was 278/322 (86.3%) and 334/396 (84.3%) respectively. The RF titers in 117 anti-CCP negative cases was >20, >40 and >60 IU/L in 62 (52.9%), 44 (37.6%) and 40 (34.1%) cases respectively.

Conclusions: For this cohort of Indian population, a cut off of 20 IU/L of RF titers has the best performance for a diagnosis of RA with an additional 18.7% cases labelled as seropositive as against the current ACR cutoffs. Anti CCP positivity also no substantially changed by using this lower cutoff. There is a need to reevaluate the population specific RF titers in conjunction with anti-CCP in Indian population.

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