adherent patients tend to perceive a worse disease condition. Further studies can clarify if low adherence is causally associated with less efficacy of therapy.

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AB0360E SLEEP DISORDER OR DEPRESSION IN KOREAN RHEUMATOID ARTHRITIS, AND ITS ASSOCIATION WITH DISEASE ACTIVITY

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Background: Rheumatoid arthritis is a chronic autoimmune disease. Psychological stress and mood disorders such as sleep disorder or depression are more frequent in patient with RA.

Objectives: The aim of this study was to evaluate the relationship between disease activities and sleep disorder or depression in Korean patients with RA.

Methods: The study enrolled 334 patients with RA who visited Hallym University Sacred Heart Hospital (South Korea). The diagnosis of insomnia and depression is based in patient questionnaire such as Pittsburgh sleep quality index (PSQI) and Beck depression inventory (BDI). Insomnia was defined as PSQI > 5 and depression was defined as BDI ≥ 13. Patients were divided into two groups (insomnia vs no-insomnia, depression vs no-depression) and the clinical aspects were compared by Mann-Whitney U-test. Age, gender, erythrocyte sedimentation rate (ESR), 28 joint disease activity score (DAS28), DAS28-P score (the subjective components of the DAS28 relative to the total components), tender joint count (TJC) and swollen joint count (SJC), quality of life measured with health assessment questionnaire (HAQ) were analyzed.

Results: The median (inter-quartile range) disease duration was 6 (4–9) years and the mean DAS28 score was 3.6 ± 1.1 . Seventy percent of the patient had insomnia and 8% had depression. Compared with patients without insomnia, insomnia patients had a higher DAS28 (3.7 ± 1.16 vs. 3.21 ± 1.0 , $P < 0.001$), higher pain DAS28-P (0.37 ± 0.17 vs. 0.32 ± 0.16 , $P = 0.004$), higher TJC (6.59 ± 5.68 vs. 2.38 ± 3.45 , $P < 0.001$) and higher HAQ score (0.49 ± 0.53 vs. 0.18 ± 0.36 , $P < 0.001$). Compared with no depression patients, depression patients had a higher DAS28 (4.07 ± 1.37 vs. 3.51 ± 1.11 , $P < 0.001$), higher pain DAS28-P (0.44 ± 0.17 vs. 0.35 ± 0.44 , $P = 0.015$), higher TJC (6.59 ± 5.67 vs. 3.71 ± 5.02 , $P = 0.006$), higher SJC (1.81 ± 5.2 vs. 0.67 ± 1.28 , $P = 0.003$), and higher HAQ score (0.63 ± 0.51 vs. 0.38 ± 0.5 , $P = 0.021$).

On univariable logistic regression analysis, insomnia was positively associated with age, DAS28, DAS28-P and BDI score. After adjustment, insomnia was positively associated with sex (female), age, BDI and DAS28 score. On univariable logistic regression analysis, depression was positively associated with PSQI, DAS28 and DAS28-P score. After adjustment, depression was positively associated with PSQI and DAS28-P score.

Conclusion: Rheumatoid arthritis patient with the sleep disorder or depression had worse clinical symptoms than those without. Rheumatologist should take sleep disorder or depression into consideration on evaluation of disease severity in RA patients.

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AB0360F GENDER DIFFERENCES IN CLINICAL CHARACTERISTICS AND COMORBIDITIES AND THEIR IMPACT ON CLINICAL OUTCOME IN KOREAN PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: Rheumatoid arthritis (RA) is a chronic auto-immune disease that is more common to female than male. Gender-based differences in

clinical features, comorbidities, and disease outcomes have been fragmentarily described. However, systematic analysis focusing on gender differences in a large RA population is scarce.

Objectives: We aimed to elucidate gender differences in clinical characteristics and comorbidities and their potential impact on clinical outcome in a large Korean cohort of patients with RA.

Methods: A total of 5,376 RA patients were included from the KOREAN Observational study Network for Arthritis (KORONA) database. Each patient was examined at baseline and three consecutive years. RA disease activity, functional disability, and quality of life were assessed by disease activity score 28 (DAS28), health assessment questionnaire (HAQ) and EuroQoL-5D (EQ-5D), respectively. The subjective health-related outcomes including visual analog scale (VAS) scores for patient's and physician's global health, patient's pain, fatigue, and sleep disturbance were collected. Clinical characteristics and comorbidities at baseline were compared according to gender. Gender impacts on clinical outcome during the four years were analyzed using generalized estimating equations (GEE) models for repeated measures. In addition, the gender effect on achieving clinical remission was analyzed using Cox-proportional hazards regression.

Results: At baseline, females (n=4,574) were younger, more erosive, and had longer disease duration than male (n=802). Females showed significantly higher scores in DAS28, HAQ, EQ-5D, and VAS for all patients' health-related outcomes. In terms of comorbidities, the prevalence of male RA was significantly higher than that of female RA in most illnesses including interstitial lung disease, cardiovascular disease, diabetes and other pulmonary disease except for depression. In the GEE model, gender was found to significantly influence the rate of change of DAS28 ($p = 0.041$), and also independently associated with this outcome ($p < 0.001$) after adjusting for age, disease duration, and baseline DAS28. Females were associated with a reduced rate of achieving DAS28 remission (HR 0.41, 95% CI 0.28-0.58) compared to male.

Conclusion: In Korean patients with RA, most comorbidities were more prevalent in male than in female. But for RA-related health outcomes, the longitudinal change in disease activity and the rate of achieving clinical remission over time were found to be worse in female RA.

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AB0360G DETECTABLE HBV DNA AT TREATMENT BASELINE PREDICTED HEPATITIS B VIRUS REACTIVATION IN INFLAMMATORY ARTHRITIS PATIENTS WITH NEGATIVE HEPATITIS B SURFACE ANTIGEN BUT POSITIVE ANTI-HEPATITIS B CORE ANTIGEN

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Background: Hepatitis B virus (HBV) reactivation in inflammatory arthritis IA (rheumatoid arthritis, psoriatic arthritis, and peripheral spondyloarthritis) patients with positive hepatitis B surface antigen (HBsAg+) is one of the treatment-related complications. The risk of reactivation in patients with negative hepatitis B surface antigen but positive anti-hepatitis B core antibody (HBsAg-/anti-HBc+) is less well defined.

Objectives: This retrospective, single centre study aimed to study the prevalence of HBV reactivation (defined as HBV DNA becoming detectable during treatment if it was undetectable at baseline, or an increase in HBV DNA titre if detectable at baseline) among IA patients with HBsAg-/anti-HBc+ status, and to investigate any factors predicting reactivation.

Methods: IA patients attending the rheumatology specialist clinic in a local tertiary hospital between 1st January 2011 and 31st December 2016 were included if they had HBsAg-/anti-HBc+ status. Demographic data, clinical parameters including treatments for IA and any use of antiviral prophylaxis, and laboratory results including anti-hepatitis B surface antibody (anti-HBs) and serial HBV DNA levels were obtained. Logistic regression was used to identify factors predicting HBV reactivation.