soft tissue. Prior to image analysis, an atlas of normal findings and measurements was comprised. Group differences were investigated using students T-test for continuous data and Fisher's exact test for nominal and ordinal data.

Results: A total of 40 patients were included in this retrospective case-control study, 20 in each group (RA and control). Position of dens was significantly more cranial in the RA group (dens to McGregor line: -1.62 mm for RA vs. 2.15 mm for controls, $p=0.002$; dens to McRae line: 3.20 for RA vs. 5.36 for controls, $p<0.001$). Visibility of alar ligaments was significantly lower in RA patients (fully visible in 10% of RA and 35% of control patients, $p=0.012$). Similarly, signal of transverse ligaments was normal in 5% of RA vs. 35% of control patients ($p<0.001$). There was no difference in length of the aforementioned ligaments ($p>0.056$).

Conclusion: With this case control study, MRI data on the position of the osseous and ligamentous structures of the cranio-cervical junction in patients with rheumatoid arthritis are available for the first time. Cranialization of the dens axis and signal changes of the transverse ligament and the alar ligaments are the most obvious findings. In a next step, the diagnostic value of MRI of the cervical spine in RA should be prospectively investigated and the available scoring system developed into an internationally established outcome measure.

Disclosure of Interests: [2] Katharina Ziegeler: None declared, Christoph Korsing: None declared, Mattias Bollow: None declared, Kay Geert A. Hermann Speakers bureau: AbbVie, MSD, Pfizer, UCB, Samsung
[3] DOI: 10.1136/annrheumdis-2019-eular.3632

THU0622B PREVENTION OF ACTIVE TUBERCULOSIS INFECTION USING INTERFERON GAMMA RELEASING ASSAY (IGRA) IN PATIENTS WITH RHEUMATOID ARTHRITIS UNDERGOING TUMOR NECROSIS FACTOR-ALPHA INHIBITORS TREATMENT

Joongyub Lee¹, Sang Hyun Joo², Yeong Wook Song². ¹Inha University Hospital, Incheon, Korea, Rep. of (South Korea); ²Seoul National University, Seoul, Korea, Rep. of (South Korea)

Background: Data on effectiveness reducing incidence of active tuberculosis (TB) by use of interferon gamma releasing assay (IGRA) have not yet been available.

Objectives: To evaluate whether diagnosis of latent tuberculosis infection (LTBI) using IGRA is effective in reducing occurrence of active-TB among patients with RA who will use Tumor Necrosis Factor alpha inhibitors (TNFi).

Methods: A retrospective cohort study was conducted using the National Health Information Database of Korea between 2008 and 2017. The enrollees had at least two claims with the RA diagnosis code, and has at least one prescription of TNFi since 2009 when national insurance of Korea started to cover the expense of IGRA. Exclusion criteria were organ transplantation, HIV infection, or active TB infection within 1 year prior to enrollment. The follow up was initiated on the day of the first prescription for TNFi, and ended on the date of the first claim on active TB, the date of death or December 31, 2017 whichever came first. The utilization of the diagnostic test method was confirmed by the codes for tuberculin skin test (TST) and IGRA claimed within 2 months prior to the initiation of the TNFi. Patients were categorized into 3 groups; no-test, TST only, IGRA (IGRA only or IGRA and TST). The incidence of active TB was defined as the presence of claims with diagnosis code for TB and the start of standard 3-drug or 4-drug first line anti-TB medication combination therapy.

Descriptive statistics on baseline characteristics of participants in each group were presented before and after application of weighting method using standardized mortality rate weight (SMRW). The incidence of active TB in each group was presented as event per 1000 person-year (PY). We treated death as competing event to the occurrence of TB. Therefore a sub-distributional hazard model was used to calculate weighted hazard ratio (wHR) and 95% confidence intervals (CI).

Results: Among the 27,021 patients who started TNFi, 15,538 RA patients were included in the analysis through inclusion and exclusion criteria. There were 6,287 patients in the no-test group, 4,677 patients in the TST group, and 4,574 patients in the IGRA group. Diabetes mellitus, chronic kidney disease, and congestive heart failure were more prevalent in IGRA group, while stroke was observed less frequently in IGRA group. After weighting using SMRW, all confounders were well balanced. During the follow up period, 4.24, 4.93, and 4.01 active TB events per 1,000 PY were observed for no-test, TST, and IGRA group, respectively. The death rate was 8.63, 9.75 and 7.96 per 1,000 PY for no-test, TST, and IGRA group, respectively. Considering death as competing event, IGRA significantly reduced the risk of active TB than no-test group (wHR

0.628, 95% CI: 0.459-0.859) and TST group (wHR 0.416, 95% CI: 0.311-0.556).

Conclusion: The incidence of active TB in RA patients using TNFi could be reduced by use of IGRA.

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Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.6485

Public health, health services research, and health economics

THU0623 FACTORS RELATED TO NON-ADHERENCE BEHAVIORS OF PATIENTS WITH RHEUMATIC DISEASES

L María. García Vivar¹, Javier de Toro-Santos², Lucía Pantoja³, Cristina Lerín Lozano⁴, Silvia García-Díaz⁵, Sabela Fernández⁶, Yvonne Mestre⁶, Lidia Feo-Lucas⁶, Luis Cea-Calvo⁶. ¹Hospital Universitario de Basurto, Bilbao, Spain; ²Hospital Universitario A Coruña, A Coruña, Spain; ³Hospital del Bierzo, Ponferrada, Spain; ⁴Hospital de Manacor, Manacor, Spain; ⁵Hospital de Sant Joan Despí Moisès Broggi, Barcelona, Spain; ⁶Merck Sharp and Dohme, Madrid, Spain

Background: Non-adherence to medication may lead to poorer clinical outcomes and should be prevented.

Objectives: We describe the frequency of non-adherence behaviors in patients with rheumatic diseases and its relationship to potentially modifiable variables.

Methods: Data were obtained through an anonymous survey handed to patients by physicians or nurses from 25 rheumatology clinics from Spain. Patients completed the survey anonymously at home and returned it by pre-paid post mail. Five different non-adherence behaviors were defined. Co-variables analyzed were patients' demographics, medication characteristics, experience with healthcare (assessed with IEXPAC "Instrument to Evaluate the EXperience of PATients with Chronic diseases" scoring 0 [worst] to 10 [best experience]), and beliefs in medicines (Beliefs About Medicines Questionnaire [BMQ], composed of a necessity and a concerns subscales and scoring -20 [weaker] to +20 [stronger beliefs]). Variables associated to non-adherence were studied with a multivariate logistic regression model.

Results: The survey was handed to 625 patients with rheumatic diseases, of which 336 (53.8%) returned it with the necessary data completed (mean age 55 [14] years, 64% women). Of them, 188 (56.0%) described at least one non-adherence behavior. The frequencies of the specific non-adherence behaviors were: 1) Forgetfulness in taking medication: 28.6%; 2) Taking medication at unscheduled hours: 5.6%; 3) Stopping medication when feeling well: 10.1%; 4) Stopping medication when feeling sick: 33.0% and 5) Stopping medication after reading the patients' information leaflet: 11.5%. The frequency of at least one non-adherence behavior was similar by age, gender, educational level, working status or by number of medicines. It was slightly higher in patients needing to take their medication 3-4 times a day (63.2%) versus 1-2 times a day (52.4%, $p=0.089$). IEXPAC scores were similar in patients with or without non-adherence behaviors (5.5 [2.0] in both groups, $p=0.960$). BMQ overall score was lower in patients with non-adherence behaviors (4.3 versus 6.5 in those without non-adherence behaviors, $p=0.001$). The frequency of non-adherence behaviors did not differ by quartiles of IEXPAC score, but it was higher in patients with lower BMQ score (Q1: 59.5%, Q2: 65.9%, Q3: 54.3%, Q4: 52.0%, p -trend = 0.014). The multivariate model (table) confirmed a relationship of non-adherence behaviors with lower BMQ beliefs scores.

Conclusion: Non-adherence behaviors are frequent in patients with rheumatic diseases and are mainly associated to patients' beliefs in their medications (assessed with BMQ). This is an important aspect that can