Objectives: The aim of our work was to investigate the factors influencing anxiety and depression in RA.

Methods: This was a cross-sectional study of 49 RA patients. We used the Hospital Anxiety and Depression scale (HAD) to assess anxiety disorders.

Results: We included 24 women and 5 men with an average age of 54.1 years. Sixty-nine percent of patients were unemployed and 81% had health insurance coverage. RA had been evolving for an average of 11.43 ± 7.32 years and the mean time to diagnosis was 2.35 years. It was erosive in 93.8% of cases. An atlanto-axial dislocation was found in 4.1% of cases and coxitis in 8.2% of cases. Eighty-three percent of patients were on cs-DMARDs and 14.2% were on biotherapy. Most patients had low active disease (53%) with a mean DAS28CRP score of 2.74 ± 0.81 . Twelve percent of patients had a probable anxiety and 18% had a probable depression.

A long delay in diagnosis was associated with a higher risk of anxiety disorders. Working patients had a lower risk of depression while patients from rural areas had a higher risk. The risk of anxiety and depression disorders was associated with increased VAS pain, EGP, and DAS28. In the multivariate study, EGP was the independent risk factor for the development of anxiety and depression disorders.

Conclusion: Anxiety and depression disorders are a frequent yet underestimated consequence in RA. Appropriate care in psychiatry is required as soon as the diagnosis is announced.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2021-eular.2066

AB0124

STRUCTURAL DAMAGE IN THE FOOT IN RHEUMATOID ARTHRITIS: DON'T MISS THE OTHER METATARSOPHALANGEAL JOINTS

M. Yasmine¹, H. Ferjani¹, D. Kaffel¹, K. Maatallah¹, S. Rahmouni¹, W. Hamdi¹.

¹Kassab Institute of Orthopedics, Rheumatology, Tunis, Tunisia

Background: The foot involvement in rheumatoid arthritis (RA) affects the functionality and the quality of life in patients. Despite this, the clinicians do not give enough care to the foot in RA patients, especially if asymptomatic, resulting in joint damage, deformity, and disability. The distribution of erosions of the other MTP joints (excluding the 5th) has not previously been studied.

Objectives: This study aimed to investigate the distribution of erosions in MTP joints and their clinical implications.

Methods: We conducted a retrospective study including patients with RA according to the American college of rheumatology/ the European league against rheumatism classification criteria. Sociodemographic data, as well as disease activity related characteristics, were recorded.

Posterior-anterior radiographs of the hands and feet of each patient were assessed for erosions.

All patients were assessed by Ultrasonography (US) of the hands. US erosions were scored 0-3 according to Szkudlarek [1]. We divided patients into two groups (G1 without MTPs erosions and G2 with MTPs erosions).

Results: We enrolled forty-two females and eleven males in our studies. The mean age was $58.6 \text{ years} \pm 12.7$ [23-77], and the mean disease duration was 8.4 years [1-47]. Rheumatoid factor or cyclic citrullinated peptide antibodies (Anti-CCP) were positive in 62.3% of cases. The mean DAS28ESR score was 5.1 ± 1.16 [2.5-7.7]. Half of the patients had the active disease (52.8%). Hand erosions evaluated with plain radiographs and the US were found in 43.1% and 50.9% of cases, respectively. The distribution of foot erosions (15.1%) was as follows: 5th right MTP (7.5%), the 5th right IPP (2%), the 1st left MTP (2%), 3th left MTP (3.8%), 4th left MTP (5.7%) and the 5th left MTP (9.4%). Erosions on MTPs with the exclusion of the 5th MTP were present in 9.4% of cases. The presence of MTPs erosion was more frequent in males ($p=0.01$) but was not associated with age ($p=0.6$) or disease duration ($p=0.2$). Seropositivity was similar between the two groups ($p=0.06$). Similarly, the inflammatory markers (ESR and CRP), as well as DAS28 ESR, did not differ between the two groups ($p>0.05$). MTPs erosion was not associated with the presence of hand erosions on a plain radiograph ($p=0.445$). However, MTPs erosion was significantly more frequent in patients with less erosive hands-on US ($p=0.034$).

Conclusion: Our study showed that screening of other MTPs (excluding the 5th) is mandatory in RA diagnosis. Interestingly, in our result, MTPs erosion is more frequent in males with less erosive hands.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2021-eular.2227

AB0125

CLINICAL CHARACTERISTICS OF RHEUMATOID ARTHRITIS PATIENTS WITH IGG4-RELATED SYNOVITIS

L. F. Chen¹, X. Zhang¹, C. Chen¹, J. D. Ma¹, Y. Mo¹, J. Lin¹, Y. Y. Zou¹, D. H. Zheng¹, L. Dai¹. ¹Sun Yat-Sen Memorial Hospital, Sun Yat-Sen University, Rheumatology, Guangzhou, China

Background: Elevated serum IgG4 (sIgG4) and IgG4+ plasma cell tissue infiltration are outstanding features of IgG4-related disease (IgG4-RD). However, elevated

IgG4 is not specific for IgG4-RD. Our previous study reported elevated sIgG4 in 46% of rheumatoid arthritis (RA) patients (*Mediators Inflamm* 2014). Whether synovium from RA patients show similar characteristics of IgG4-RD and how about the clinical characteristics of RA patients with IgG4-related synovitis have not been reported yet.

Objectives: To explore the serum and synovial IgG4 level and their correlation with disease indicators in RA.

Methods: Active RA patients who underwent needle synovial biopsy with qualified synovium tissue were recruited. Demographic and clinical data were collected simultaneously. Synovium tissue were stained with H&E for Krenn synovitis score and immunohistochemistry for positive cell densities of CD20, CD38, IgG and IgG4. Serum IgG4 level was detected by immunonephelometry.

Results: Among 96 RA patients recruited, 74 (77.1%) were female, the median age was 55.0 ($46.0\sim61.0$) years, disease duration was 42.0 ($12.0\sim120.0$) months and SDAI was 31.2 ($22.1\sim42.8$).

The median sIgG4 was 1.38 ($0.86\sim2.42$) g/L and 49 (51.0%) patients had elevated sIgG4. Compared with those with normal sIgG4, RA patients with elevated sIgG4 had significantly higher levels of PrGA [7 (5-8) vs. 6 (4-7)], ESR [90 (64-116) mm/h vs. 61 (38-75) mm/h], CRP [46.20 (17.20-74.20) mg/L vs. 18.90 (9.46-49.20) mg/L], DAS28-ESR [6.3 (5.6-7.4) vs. 5.7 (4.7-6.4)], SDAI [34.2 (25.3-48.8) vs. 27.8 (18.9-35.9)] and HAQ-DI [1.70 (0.61-2.28) vs. 0.88 (0.40-1.75), all $P<0.05$]. Meanwhile, they also showed significantly higher synovial counts of CD38+ plasma cells [1240 (559-2290) /mm² vs. 1020 (354-1777) /mm²], IgG4+ plasma cells [106 (39-249) /mm² vs. 68 (3-123) /mm²], and higher ratio of IgG4+/IgG+ plasma cells [26.3 (15.5-38.0) % vs. 15.2 (0.9-24.7) %, all $P<0.05$].

The median IgG4+ plasma cells count was 83 ($10\sim192$) /mm² and median ratio of IgG4+/IgG+ plasma cells was 19.1 ($8.4\sim31.5$)%. Both of them correlated positively with ESR, CRP and sIgG4 ($r=0.216\sim0.394$, all $P<0.05$). There were 46 (47.9%) patients with IgG4+ plasma cells >10 /HPF, who had significant higher ESR [86 (50-109) mm/h vs. 65 (40-84) mm/h] and CRP [43.35 (16.93-77.85) mg/L vs. 26.15 (9.54-52.53) mg/L, both $P<0.05$] than those with IgG4+ plasma cells ≤ 10 /HPF. There were 13 (13.5%) patients with the ratio of IgG4+/IgG+ plasma cells $>40\%$, and 11 (11.5%) patients with both IgG4+ plasma cells >10 /HPF and IgG4+/IgG+ plasma cells ratio $>40\%$ (IgG4-related synovitis). RA patients with IgG4-related synovitis had significant higher ESR than the others [106 (53-125) mm/h vs. 69 (41-91) mm/h, $P<0.05$].

There were 10 (10.4%) patients showing elevated sIgG4 and IgG4-related synovitis. Four patients completed 1-year follow-up and all of them achieved remission at 6th month (SDAI ≤ 3.3 , Figure 1). Only one patient had radiographic progression at 12th month.

Figure 1. Dynamic disease activity of 4 RA patients with elevated sIgG4 and IgG4-related synovitis during 1-year follow-up.

Conclusion: IgG4-related synovitis can be found in RA patients. Their clinical significance in disease characteristics and outcomes are worth further study.

Acknowledgements: This work was supported by National Natural Science Foundation of China (no. 81971527, 81801606 and 81801605), Guangdong Natural Science Foundation (no. 2018A030313541 and 2018A030313690), Guangdong Medical Scientific Research Foundation (no. A2018062), Guangdong Basic and Applied Basic Research Foundation (no. 2019A1515011928 and 2020A1515110061), and Science and Technology Program of Guangzhou (no. 201904010088).