Conclusion: Depression/anxiety symptoms was very frequent in our cohort of RA patients. The disease activity measure with different indexes and the HAQ was significantly higher in the patients with depression/anxiety. It is possible that psychological factors influence the RA treatment outcomes. Therefore screening and therapy of anxiety and depression should be considered in the regular management of RA patients.

REFERENCES

- [1] Michelsen B, Kristianslund EK, Sexton J, Hammer HB, Fagerli KM, Lie E, Wierød A, Kalstad S, Rødevand E, Krøll F, Haugeberg G, Kvien TK. Do depression and anxiety reduce the likelihood of remission in rheumatoid arthritis and psoriatic arthritis? Data from the prospective multicentre NOR-DMARD study. *Ann Rheum Dis*. 2017 Nov;76(11):1906-1910.

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AB0326

RECOGNITION AND IMPLEMENTATION OF EULAR RECOMMENDATIONS FOR RHEUMATOID ARTHRITIS/CARDIOVASCULAR RISK MANAGEMENT AMONG INTERNAL MEDICINE AND RHEUMATOLOGY FELLOWS: DATA FROM AN ACADEMIC TERTIARY CARE LEVEL CENTER

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Background: Rheumatoid arthritis (RA) patients present an increased risk of cardiovascular (CV) morbidity and mortality compared to the general population. Patients from Latin-America present distinctive features and some of them are relevant when assessing CV risk. EULAR recommendations include CV risk assessment for all the patients at least once every 5 years and its reconsideration following major changes in anti-rheumatic therapy. Importantly, failure to identify and manage CV comorbidity in RA patients has been recognized by rheumatologists, although there is no information in Latin-America.

Objectives: To investigate knowledge about EULAR recommendations for RA-CV risk assessment/management (K-EULAR-R) among internal medicine and rheumatology fellows from an academic and tertiary care level center, to identify physician's perception about responsible(s) for CV risk assessments and about major barriers to perform the assessments and to investigate the appropriated identification of major CV risk factors. Potential differences among both group of trainees were additionally investigated.

Methods: Internal medicine fellows (N=105, 1st to 4th grade participants were represented) and rheumatology fellows (N=10, 4 from first grade and 6 from second grade) were invited to anonymously answer a questionnaire designed by 2 investigators to investigate K-EULAR-R and integrated by 11 items classified in 3 categories: "general knowledge about CV risk in RA patients" (4 items), "timing of CV risk assessment" (4 items) and "appropriated statin use" (3 items). In addition, fellows were directed to select and rate main responsible for CV risk assessment (5 options), major barriers to apply EULAR recommendations (6 options), and to correctly identify CV risk factors (20 options). After questionnaire completion, an overall-CV-knowledge-Likert scale (superior, borderline or inferior) was assigned to each participant by an independent observer. The study received IRB approval. Descriptive statistic was used and questionnaire was scored to a decimal scale.

Results: Ninety-three (85%) internal medicine fellows and 10 (100%) rheumatology fellows participated. Rheumatology fellows scored higher in the K-EULAR-R questionnaire when compared to internal medicine fellows (6.9±1.4 vs. 5.5±1.4, p=0.004) and the higher score was replicated in the category of "general knowledge about CV risk" (8.3±2.0 vs 5.3±2.5, p=0.001), meanwhile no differences were detected in the scoring of the categories "timing of CV risk assessment" and "appropriated statin use". No differences among grades within each group were identified.

The majority of the rheumatology fellows rated themselves as the specialist responsible for CV risk assessment (80%); meanwhile this percentage decreased to 45.7% among the internal medicine fellows (p=0.084); fellows from both groups identified lack of time during rheumatic evaluations as the main barrier to perform CV risk assessment (60% and 57%, respectively).

Adequate CV risk factor identification varied from 30% (for contraceptive use) to 100% (for smoking habit), and these were similar among both groups. Up to 82.5% of the fellows identified incorrectly ≥ 1 CV risk factor and high serum triglyceride levels was the highest (49%).

Conclusion: Knowledge about CV risk management in RA patients was suboptimal among trainees in internal medicine and rheumatology from an academic and tertiary care level center in México City; trainees in rheumatology performed better. There is a need to reinforce the topic during fellow's residency.

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AB0327

RHEUMATOID ARTHRITIS PATIENTS HAVE VITAMIN-D DEFICIENCY COMPARED TO AGE SEX MATCHED CONTROL. WHAT CONTRIBUTE TO THIS DEFICIENCY?

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Background: Vitamin-D (vit-D) is believed to have an immunomodulatory and anti-inflammatory action. As a result, low vit-D has been proved to increase susceptibility to the development and to increase the inflammatory activities of rheumatoid arthritis (RA). This study looked at 25-vit-D level in RA patients and in their matched age and sex controls, and investigated what contribute to the risk of low 25-vit-D in RA.

Objectives: The study looked at RA diseases activities, renal function, demographic features and blood biochemistry relation to 25-vit-D level.

Methods: 62 RA patients and 82 control were recruited for the study. 25-vit-D level, RA diseases activity parameters and blood biochemistry (full blood count, liver function test, and renal profile) were obtained on the same day. Estimated glomerular filtration rate (eGFR) calculated with Modification of Diet in Renal Disease (MDRD) formula. Body mass index (BMI) calculated as mass (kg)/Height (m)². Univariate regression analysis was carried out to determine the relationship between 25-vit-D level and all the parameters of interest (as above).

Results: 65 RA, and 82 controls matching for age (48±13 years for RA, and 47±14 years for the controls, p=0.58) and sex (57 F (88%), M=8 (12%) RA, 67 F (82%), 5 M (18%) controls, p=0.23) were included for the study. The mean 25-vit-D level was 41±31 nmol/l for the RA patients (normal range: 50-80), and 52±33 nmol/l for the controls (p=0.03).

Univariate linear regression among RA patients revealed a positive linear relationship between 25-vit-D level and age of the patients (p=0.02, CI: 0.08, 1.24), creatinine level (p=0.01, CI: 0.13, 0.96), body surface area (p=0.02, CI: 9.47, 111), body mass index (BMI) (p=0.03, CI: 0.17, 3.18), and calcium level (p=0.04, CI: 1.38, 69.6). 25-vit-D level was negatively associated with eGFR (p=0.04, CI: -0.20, -0.01), microalbuminuria level (p=0.03, CI: -0.26, -0.00), and CRP level (P=0.03, CI: -0.47, -

Conclusion: Vit-D receptors are present in most cells in the body and in the T and B lymphocytes. The active form of vit-D (1, 25 vit-D) is one of the most potent modulators of the immune system. Hence, the negative relationship between 25-vit-D and CRP support 25-vit-D deficiency role in the exacerbation of the inflammatory status, and possibly in the subclinical renal impairment; as shown by the negative association between eGFR and the 25-vit-D. The relation between the subclinical renal impairment and the vit-D deficiency is further supported by the negative linear relationship between 25-vit-D and the urine microalbumin level and the positive linear relationship association between 25-vit-D and the serum creatinine level. The positive association between 25-vit-D and the age of the participants might reflect the awareness of the older population about the importance of sun exposure for health. Screening for vit-D deficiency might be an important step to detect subclinical renal insufficiency in RA. Vit-D supplement might help in ameliorating the inflammation of RA and the subclinical renal impairment especially its well known that our general population is already Vit-D deficient and this worsen by the inflammatory conditions that they develop.

REFERENCES

- [1] Kostoglou-Athanassiou I, Athanassiou P, Lyraki A, Raftakis I, Antoniadis C. (2012) Vitamin D and rheumatoid arthritis. *Ther Adv Endocrinol Metab* 3 (6): 181-187.

- [2] Adorini L. (2005) Intervention in autoimmunity: the potential of vitamin D receptor agonists. *Cell Immunol* 233: 115–124
- [3] Hewison M. (2012) Vitamin D and immune function: autocrine, paracrine or endocrine? *Scand J Clin Lab Invest Suppl* 243: 92–102

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AB0328 SECONDARY SARCOPENIA IN RHEUMATOID ARTHRITIS PATIENTS TREATED BY BIOLOGIC DISEASE MODIFYING ANTI-RHEUMATIC DRUGS

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Background: Sarcopenia is characterized by a loss of muscle mass and strength, which leads to a reduced physical ability, poor quality of life (QoL), frailty and mortality. Rheumatoid arthritis (RA) is considered a cause of secondary sarcopenia.

Objectives: To clarify the effectiveness of biologic disease-modifying anti-rheumatic drugs (bDMARDs) on sarcopenia, including the physical ability, body composition and nutritional status.

Methods: This was a prospective cohort study including consecutive 41 patients (11 men, 30 women, 63.6±16.1 years old) with RA who started bDMARDs for the first time at Niigata Rheumatic Center. The diagnosis of secondary sarcopenia was made according to the diagnostic algorithm of the Asian Working Group for Sarcopenia (AWGS), excluding the criteria about older age. We observed the disease activity of RA, physical ability, body composition, nutritional status and QoL at baseline and 6 months. The disease activity was assessed by the disease activity score-28 joint count erythrocyte sedimentation rate (DAS28-ESR) and clinical disease activity index (CDAI). The physical activity was determined using the health assessment questionnaire (HAQ), 10-m walking test (10MWT) and timed up and go test (TUG). The nutritional status was determined based on the controlling nutrition status (CONUT) score and prognostic nutritional index (PNI). The overall QoL was measured by European quality of life scale- 5 dimensions (EQ-5D).

Results: Among 41 patients who started bDMARDs, 19 were classified as having sarcopenia, and 7 were classified as having pre-sarcopenia. The bDMARD was certolizumab pegol in 10 patients, adalimumab in 7, abatacept in 7, golimumab in 6, tocilizumab in 5, infliximab in 3 and etanercept in 3. The DAS28-ESR (4.7±1.3 vs. 2.6±1.3, p<0.001) and CDAI (18.6±9.4 vs. 7.2±7.3, p<0.001) decreased significantly after 6 months of bDMARDs therapy. The physical activity was significantly improved after 6 months of bDMARDs: HAQ (1.1±0.9 vs. 0.7±0.9, p<0.001), 10MWT (1.5±0.7 vs. 1.6±0.6 m/s, p=0.046) and TUG (10.0±5.0 vs. 9.5±6.2 s, p=0.024). Regarding the nutritional status, the CONUT score (3.8±0.5 vs. 1.1±1.2, p<0.001) and PNI (44.9±6.4 vs. 49.7±4.1, p<0.001) were significantly improved after 6 months of bDMARDs. The EQ5D was also improved after 6 months of bDMARDs (0.64±0.15 vs. 0.71±0.20, p=0.010). The body composition analysis showed a significant increase in the body weight (54.3±13.2 vs. 55.4±14.4 kg, p=0.006) and fat mass (16.3±7.3 vs. 17.4±7.8 kg, p<0.001) after 6 months of bDMARDs but no significant increase in the appendicular skeletal muscle mass (14.7±4.3 vs. 14.8±4.5, p=0.111). The proportion of patients classified as having sarcopenia showed a decreasing trend after 6 months of bDMARDs therapy (46.3% vs. 24.4%, p=0.0637).

Conclusion: After 6 months of bDMARDs therapy, the physical ability, nutritional status and QoL were significantly ameliorated. While the muscle mass was not markedly increased, the proportion of patients with sarcopenia showed a decreasing trend. The administration of bDMARDs might be useful for preventing secondary sarcopenia in RA patients.

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AB0329 CERVICAL SPINE INVOLVEMENT IN RHEUMATOID ARTHRITIS

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Background: After the small peripheral joints, the cervical spine is the second most involved region in rheumatoid arthritis (RA). The most frequent radiological features are the atlantoaxial subluxation (AAS) which can be anterior, posterior or vertical. During the course of the disease, the affection of the cervical spine has no symptoms for a long time due to the adaptability of neurological structures. The onset of myelopathy can occur at any time. MRI assessment compared to functional cervical spine X-ray is more sensitive method to provide not only AAS but also soft tissue involvement such as periodontal synovitis or fibrous pannus and even more odontoid erosion. New data show that there is a decreasing prevalence of cervical involvement because of the biologics.

Objectives: We assessed RA patients in permanent remission with MR imaging. RA patients have no cervical pain or any neurological symptoms. We wished to explore the cervical spine involvement: AAS, odontoid erosion or periodontal soft tissue thickening. We also wished to determine the affection of cervical spine in RA patients receiving different treatment strategies.

Methods: Altogether 49 RA female patients were included. Among them, 15 were MTX-treated, biologic-free, 34 patients received biologics (17 infliximab [IFX] and 17 tocilizumab [TCZ]) as first-line biologic treatment, in combination with MTX. There was no significant difference between the main characteristics of these subgroups. ESR, CRP and DAS28 were determined in all RA patients in every 3 months. We calculated sumESR, sumCRP and sumDAS28 indices from the past 3 years.

Results: We detected anterior AAS in one-quarter of RA patients (13 affected patients from the total 49) (26.5%). There was no significant difference between the therapeutic subgroups. No posterior or vertical AAS occurred. Compared with patients without cervical involvement, the patients with AAS showed higher sumCRP and sumESR levels, higher sumDAS28 scores and more frequent seropositivity, but these differences were not significant. Soft tissue involvement of the cervical spine was detected in 33.3% of MTX-treated, in 35.3% of IFX-treated and in 5.9% of TCZ-treated RA patients. Eight RA patients had odontoid erosion (16.3%), 3 from the MTX, 2 from the IFX and 3 from the TCZ-treated subgroups. In relation to soft tissue involvement and odontoid erosion we did not find any correlation with age, disease duration, seropositivity, sumESR, sumCRP or sumDAS28 indices.

Conclusion: These findings suggest that the presence of cervical involvement in RA patients is an important and frequent phenomenon even in asymptomatic patients. Higher ACPA titer, high disease activity and erosive disease at baseline are predictors of atlantoaxial involvement. With the appropriate disease control with conventional or biologic treatment, progression of cervical spine involvement can also be prevented.

REFERENCES

- [1] The Craniovertebral Junction in Rheumatoid Arthritis: State of the Art. Ferrante A, Ciccio F, Giammalva GR, Iacopino DG, Visocchi M, Macaluso F, Maugeri R. *Acta Neurochir Suppl*. 2019;125:79-86.
- [2] Magnetic resonance imaging of the craniovertebral junction in early rheumatoid arthritis. Carotti M, Salaffi F, Di Carlo M, Sessa F, Giovagnoni A. *Skeletal Radiol*. 2018 Sep 11.

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