of RA in group I was 35.0 years, in group II - 66.2 years.; RA duration was 14.4 years and 4.6 years, respectively. Long-term history of glucocorticoids use (for more than 3 months) was observed in 50% of patients in group I, and in 42% of patients in group II.

Results: 40 (18%) patients in group I and 17 (26%) patients in group II had fragility fractures. Among patients with fragility fracture, 23 (57.5%) patients in group I and 6 (35%) patients in group II received glucocorticoid therapy for more than 3 months. Two or more fractures in history had 16 (40%) in group I, and 3 (18%) in group II.

Conclusion: The frequency of fragility fracture in the study groups was comparable ($p > 0.05$), despite the age of patients. But, the frequency of refractures was higher in patients with RA-onset at young age, which, apparently, is a consequence of long RA disease duration and use of glucocorticoids.

Disclosure of Interests: None declared

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SAT0081

FOOTPRINT OF THE BRAIN-DERIVED NEUROTROPHIC FACTOR ON PAIN AND MOOD PERCEPTION OF PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: Depression and cognitive impairment have been frequently reported in rheumatoid arthritis (RA) (1). Studies of the molecular mechanisms behind these phenomena attract increasing attention. We previously reported that signaling through the insulin-like receptor is impaired in RA and has consequences for pain processing (2).

Objectives: We investigated the central and peripheral footprint of the major neurotrophin in the central nervous system, brain-derived neurotrophic factor (BDNF), on pain and mood perception of RA patients.

Methods: Pain symptomatology was assessed in 216 female RA patients (mean age 52y, mean disease duration 10 years) by a visual analogue scale (VAS), 18 tender points count (TPC), and by pressure-induced pain threshold measurement. The mood was patient-reported based on the Hospital Anxiety and Depression Scale (HADS). Clinical RA activity was assessed by DAS28. Serum levels of BDNF, IL6, IL1b, IL10 and IFN-gamma were measured by ELISA. Transcription of FOXO1 and FOXO3 was measured by RT-PCR in whole-blood RNA. Effect of BDNF signaling in leukocytes was assessed by differentially expressed gene (DEG) analysis in RNAseq of 24 female RA patients (R-studio, Bioconductor). High-resolution brain MRI was performed in a representative selection of 16 patients. Brain volumes were analyzed with MAPER software for accurate measurement of 83 anatomical regions (3) and compared between two groups of patients with high and low serum BDNF, respectively.

Results: In RA patients, high serum levels of BDNF were associated with low TPC (4.1 vs 5.3, $p=0.04$) and higher pain threshold (kPa, 416 vs 382, $p=0.09$). No connection between BDNF and mood measures was evident. High BDNF was associated with high serum VEGF ($p<0.001$), IFNg ($p=0.0004$), IL1b ($p=0.036$) and serum insulin ($p<0.001$), but low resistin ($p=0.059$). No correlation was found between BDNF with either serum IGF1 or inflammation parameters DAS28 and IL6. Serum BDNF was functional, since the RA patients with high BDNF had significantly larger brain volumes in specific regions and significantly lower FOXO1 mRNA in blood leukocytes ($p=0.03$). Specifically, structures of the limbic system, parahippocampus, lingual gyrus, nucleus accumbens and thalamus, key regions for the transmission of nociceptive information and central modulation of pain, were enlarged. BDNF production was measured in CD4-CD8- PBMC and was inversely related to expression of its high-affinity receptor TrkB in CD4+ PBMC. DEG analysis in CD4 T cells showed that low TrkB was associated with CD28+ transitional memory phenotype.

Conclusion: We conclude that high serum BDNF was associated with larger volumes of nociception-related brain regions and lower pain perception, acting independently of IGF1 and systemic inflammation.

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SAT0082

FRAX AND DAS IN MOROCCAN RHEUMATOID ARTHRITIS PATIENTS

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Background: Rheumatoid Arthritis (RA) is one of the risk factors for the calculation of the 10 years fracture probability assessed by the FRAX tool.

Objectives: The aim was to study the association of disease activity and the 10 year fracture risk probability by the FRAX tool in our RA patients and their impact on fracture prevalence.

Methods: Cross-sectional study of the association FRAX and disease activity score (DAS 28 CRP) was designed. Patients with RA were included. Mean DAS was calculated for each patient adjusted on his follow-up duration. Data about patients (demographic, disease characteristics and fracture assessment) were collected. The 10 year fracture risk probability for major osteoporotic fracture was calculated with and without BMD (bone mineral density) using the FRAX tool for Morocco. Descriptive analysis and regressions were performed with SPSS.20. $p<0.05$ was considered significant.

Results: One hundred and ninety nine RA patients were included with mean age of 55.5 ± 12 years. Women represented 91% and 40.1% had osteoporosis. Remission was observed in 86.4% with 95.5% taking methotrexate. 17.1% had vertebral fractures. FRAX and DAS were associated ($p=0.03$), and both explained vertebral fracture (VF) prevalence. When adjusted on disease parameters, FRAX with and without BMD explained the vertebral prevalence ($p=0.02$, OR=1.09[1.01-1.19]). However, age remains the only predictor of VF when adjusted on osteoporosis factors (DAS28CRP, menopause, BMI, smoking, diabetes, gender, steroid use, HAQ) and FRAX BMD.

Conclusion: Persistent disease activity was associated to high 10 year fracture risk probability calculated by the FRAX tool in RA.

Disclosure of Interests: None declared

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SAT0083

PREVALENCE OF DYSPHAGIA AND ASSOCIATED RISK FACTORS IN ELDERLY PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: Dysphagia (swallowing disorder) is an important health concern among the elderly that is associated with a poor prognosis [1]. Rheumatic diseases such as dermatomyositis are thought to represent an important risk factor for dysphagia, but few studies have described the association between dysphagia and rheumatoid arthritis (RA), and details on the prevalence of dysphagia in RA patients is not known [2] [3].

Objectives: The present study aimed to determine the prevalence of dysphagia and associated risk factors among elderly patients with rheumatoid arthritis.

Methods: We conducted a cross-sectional study including 93 patients with RA and osteoarthritis (OA) over 65 years of age. OA patients were included in the study as healthy controls. Patients with a history of stroke, neuromuscular disease, or head and neck tumors were excluded from the study. From July to November 2019, the water swallowing test (WST) and repetitive saliva swallowing test (RSST) were performed to evaluate the presence or absence of dysphagia in the patients. We also checked oral conditions, hoarseness, temporomandibular joint symptoms, cervical range of motion limitations, and grip strength. In addition, interviews were conducted to investigate swallowing ability and aspiration history. We compared the prevalence of dysphagia between RA and OA patients and explored potential risk factors for dysphagia in RA patients using logistic regression models.

Results: Our study subjects comprised 63 RA patients (mean age, 73.8 years; 86.5% female) and 30 OA patients (mean age, 75.8 years; 82.3% female). The WST and RSST revealed that RA patients had a significantly higher prevalence of dysphagia than OA patients (23.8% vs 6.7%, $p<0.05$). While RA patients with dysphagia ($n=15$) were significantly older and had a longer disease duration than the OA patients, we observed no difference in disease activity or administered drugs. Of the RA patients with dysphagia, 60% reported no previous episodes of aspiration. Increasing age (odds ratio (OR) 3.21, 95% confidence interval (CI) 1.06-4.56), cervical range of motion limitations (OR 3.14, 95% CI 1.02-7.24), opening disorder of the jaw (OR 2.26, 95% CI 1.12-4.86), and decreased grip strength (OR 1.96, 95% CI 1.01-4.15) were identified as factors related to the presence of dysphagia. Coexistence of Sjogren's syndrome did not significantly affect the prevalence of dysphagia.

Conclusion: Dysphagia was more prevalent among RA patients than in OA patients, suggesting an association with temporomandibular involvement, cervical disorder, and muscle weakness. Subclinical dysphagia should be assessed and monitored carefully in the clinical course of elderly patients with RA.

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