Conclusion: RA implies a higher CV risk. Traditional CV risk factors explains only partially the global risk. These findings support that RA acts as an independent cardiovascular risk factor.

Disclosure of Interests: None declared

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SAT0078

SAFETY OF LOW DOSE METHOTREXATE (MTX) IN HUMAN IMMUNODEFICIENCY VIRUS (HIV) INFECTION

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Background: Increased awareness of the efficacy of MTX in rheumatic disease is leading to more MTX use in patients from HIV endemic areas. While HIV related immunosuppression may contribute to improvement of some rheumatic diseases, immune reconstitution from highly active antiretroviral therapy (HAART) may lead to exacerbation or presentation of autoimmune disorders for which MTX therapy may be warranted. Most management guidelines for rheumatic disease do not address MTX use in the context of HIV.

Objectives: To systematically review the published literature on the safety of using MTX ≤30mg per week in HIV.

Methods: We searched CINAHL, Embase, Global, MEDLINE and World of Science databases (Jan 1990 to May 2018) for terms including 'methotrexate' and 'human immunodeficiency virus'. We also searched citations from review articles. Titles, abstracts or full manuscripts were screened independently by 2 reviewers to identify studies reporting HIV in patients taking MTX. Study quality was assessed using the McGill Mixed Methods Appraisal Tool (MMAT). Data was extracted on MTX and HIV adverse events (MTX toxicity, HIV viral load, CD4 count). Descriptive summaries are presented for studies providing outcomes in patients taking MTX ≤30mg per week.

Results: After removing duplicates and studies not meeting criteria or not providing sufficient information, 42 of the 2714 identified reports were included (1 clinical trial, 2 cohort, 1 cross-sectional study, 38 case reports/case series). Most reports (81%) originated from USA or Europe. Study quality was generally good with most studies fulfilling 50-100% of MMAT criteria. The randomized controlled trial (USA) assessing MTX on atherosclerotic disease in HIV showed that adverse events were more common in MTX versus placebo (12.8% vs 5.6%, p non-inferiority <0.05) and included infection, transient CD4 and CD8 drop, pulmonary toxicity, and death (1 attributed to MTX/HIV, 1 unrelated). One cohort study (South Africa) reported 43 RA patients on MTX who acquired HIV. In this cohort, RA generally improved despite only 5 individuals continuing MTX. No data on MTX adverse event rates was reported. One cohort study (USA) reported 13 HIV patients with myositis. One received MTX (with other immunosuppression) without MTX adverse effects but died due to AIDS. A cross-sectional study (France) of 43 HIV pts with autoimmune disease reported one patient on MTX (and other immunosuppression) developed an adverse event (cytopenia) compared to 5/33 patients not on MTX (cytopenia). The 38 case reports/series described 54 individuals with HIV receiving MTX. Of these studies, 27 (describing 42 subjects) reported on MTX adverse events and 35 (describing 46 subjects) reported on HIV adverse events. MTX adverse events developed in 29 subjects (hematologic 13, renal/hepatic 1, opportunistic infections 10, other events 2). HIV adverse events were noted in 23 subjects (Kaposi's sarcoma 4, CD4 decrease 16, HIV viral titer increase 4). Five deaths were reported (2 infection, 1 infection and wasting, 2 HIV related deaths). Most subjects also received corticosteroids or other immunosuppressants including biologics.

Conclusion: There remains limited data on the safety of low dose MTX in HIV. Surveillance for HIV is warranted for individuals on MTX who are at risk for acquiring HIV. Caution and careful monitoring for MTX toxicity, opportunistic infections and HIV state is suggested if MTX is used in the setting of HIV particularly if combined with other immunosuppression.

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SAT0079

FEATURES OF CLINICAL MANIFESTATIONS IN PATIENTS WITH ACTIVE RHEUMATOID ARTHRITIS IN THE PRESENCE OF SIGNS OF CENTRAL SENSITIZATION

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Background: The presence of central sensitization (CS) is observed in 25-30% of patients with rheumatoid arthritis (RA). CS is associated with more severe pain, depression, and anxiety.

Objectives: To evaluate the effect of CS on activity indicators and clinical manifestations in patients with active RA.

Methods: The study group consisted of 60 patients with medium or high RA activity (DAS28 ≥3.2), 75% female, age 54.5±17.8 years, 82.1% RF "+", 75% ACPA "+", DN4 and PainDETECT questionnaires were used to identify CS signs. Signs of CS were detected in 43% of patients. Clinical parameters and indicators of disease activity in patients with RA CS "+" and CS "-" were compared.

Results: Groups of patients with RA CS "+" and CS "-" did not differ in age - 55.5 [48.0; 67.5] and 54.0 [40.0; 62.0], $p=0.26$, body mass index - 24.54 [22.6; 26.78] and 25.04 [21.34; 29.665] kg/m², $p=0.64$, duration of illness: 6.5 [2.5; 13.0] and 10.0 [5.0; 16.5] years, $p=0.13$, level of C-reactive protein: 7.2 [1.0; 23.4] and 8.1 [3.6; 24.3], $p=0.53$.

SC "+" patients had a higher level of pain on a visual analog scale, VAS (patient score) - 70.0 [60.0; 80.0] and 60.0 [40.0; 70.0], $P=0.01$; DAS28 - 5.33 [3.38; 6.42] and 4.5 [3.645; 5.4], $p=0.04$; EQ-5D - 0.52 [0.02; 0.52] and 0.59 [0.52; 0.71], $p=0.01$; anxiety level (Hads-T) - 8.0 [7.0; 10.0] and 4.5 [2.5; 6.0], $p=0.001$ and depression (Hads-D) - 7.5 [6.0; 10.5] and 5.0 [2.5; 7.5], $p=0.02$. The groups did not differ significantly in the values of SDAI, CDAI, and HAQ, as well as in the assessment of health by the doctor (VAS) - 60.0 [50.0; 70.0] and 60.0 [50.0; 60.0], $p=0.42$.

Conclusion: The presence of SC is associated with more intense pain, anxiety, depression, and DAS28 activity. This should be taken into account when planning therapy, including deciding whether to "switch" DMARDs and prescribing antidepressants and anticonvulsants.

Disclosure of Interests: None declared

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SAT0080

COMPARATIVE ANALYSIS OF FRAGILITY FRACTURE IN PATIENTS WITH ELDERLY ONSET RHEUMATOID ARTHRITIS AND YOUNG ONSET RHEUMATOID ARTHRITIS

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Background: Rheumatoid arthritis (RA) is a chronic autoimmune disease, characterized by erosive arthritis and systemic organ involvement. Chronic inflammation, long RA disease duration, decreased physical activity, immobilization, glucocorticoids use lead to local (periarticular osteoporosis) and generalized loss of bone tissue, decrease in bone mineral density, contravention of microarchitectonics and increased risk of fragility (low-energy) fractures. The structure and density of bone tissue at elderly onset RA, in addition to the above factors, are affected by comorbid diseases, sex steroids level decrease and molecular changes in bone tissue, specifically attributed to aging, followed by increased bone resorption. Fractures reduce the quality of life, have a negative impact on the course of the underlying and concomitant diseases.

Objectives: Compare frequency of fragility fracture in patients with elderly onset rheumatoid arthritis and young onset rheumatoid arthritis.

Methods: We included 474 patients with RA diagnosed at 25–78 years old and fulfilled the American College of Rheumatology (formerly American Rheumatism Association) classification criteria for RA revised in 1987. The patients were divided into two groups depending on age at the RA-onset: The first group (group I) included 217 patients with young onset RA (at 25 to 44 years), second group (group II) included 66 patients with elderly onset RA (aged ≥60 years). The distribution of patients into groups was consistent with the age classification of the World Health Organization. In total, it was selected 283 RA patients. The mean age in group I was 50.4 years, in group II - 71.2 years. The mean age at the onset

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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