algorithm. A 5-year prospective follow-up for new CVD events, type II diabetes and medication for hypertension and hyperlipidemia was completed in all the patients. The event-free survival curves were built and the Mantel-Cox analysis was performed with respect to serum IGF1, where IGF1 levels below or equal to the median 139 ng/ml were considered low.

Results: Low IGF1 was clinically significant. These patients were recognized by high prevalence of hypertension (26% vs. 7.9%, $p=0.001$), overweight (19% vs 6.8%, $p=0.016$) and hypercholesterolemia (71% vs 48%, $p=0.0025$), which resulted in a higher eCVR in these RA patients (7.2% and 3.3%, $p<0.001$). When adjusted by age, low IGF1 group had higher serum IL6 (pg/ml: 2.1[0.2-3.0] vs 0.7[0.1-4.2], $p=0.038$) and ESR (mm/h: 12[7-15.5] vs 5.5[4-9], $p=0.02$), and higher prevalence of MTX monotherapy (56% vs. 39%, $p=0.024$). At prospective follow-up, 12 CVD events were registered. The median age at CVD event was 67 years and disease duration 14 years. Among the new CVD events were 4 ischemic strokes, 3 chronic atrial fibrillations and 2 incidental aorta aneurysms, which all could be viewed as directly related to hypertension. Low IGF1 showed high probability for new CVD events (OR 4.96, [95%CI:1.17-34.2], $p=0.029$). Additionally, low IGF1 group had a significant increase in medication for hypertension (+19.5% vs +4.8%, $p=0.00011$), but not type II diabetes and statins. In a prediction model, a combination of low IGF1 and RA duration>10 years indicated 80.5% specificity for development of new CV events.

Conclusion: We identified low normal levels of IGF1 to be associated with higher prevalence of CVD events in RA patients. Importantly, low IGF1 appeared to be an independent predictor of hypertension in middle-aged female patients.

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FRI0029 DEVELOPMENT OF AN ALGORITHM FOR THE CLASSIFICATION OF CARDIOVASCULAR COMORBIDITY IN RHEUMATOID ARTHRITIS: DATA FROM THE ONTARIO BEST PRACTICES RESEARCH INITIATIVE

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Background: Cardiovascular disease (CVD) is increased in rheumatoid arthritis (RA). The ability to accurately identify CVD and its risk factors is important for primary and secondary prevention strategies. RA registries collect comorbidity data, but discordance between physician-reported and patient-reported comorbidities often exists.

Objectives: We aimed to develop an algorithm for the classification of CVD and CVD RF in a representative RA registry.

Methods: Data were collected from the Ontario Best-practices Research Initiative (OBRI), a clinical registry of RA patients followed in routine care in Ontario, Canada. Clinical information, including patient medication profile, was obtained at registry entry, through physician visits and patient telephone interviews. Cardiovascular disease (CVD) was defined as having ≥ 1 of myocardial infarction (MI), coronary artery disease (CAD), cerebral vascular accident (CVA, including transient ischemic attack and stroke), or peripheral arterial disease (PAD). CVD risk factors included hypertension (HTN), dyslipidemia (DLD), diabetes mellitus (DM), and current smoking.

Results: An algorithm for classifying CVD and CVD risk factors was developed including the 2033 subjects with baseline data. At cohort entry, the prevalence of CVD was 5.4% ($n=110$), HTN 670 (32.9%), DLD 401 (19.7%), DM 165 (8.1%), and current smoking 346 (17%). Seventeen (15.7%) subjects were not identified as having CVD by physician-report but were classified as having CVD upon medication review. Discrepancy between physician and patient-reported CVD RF were: 207 for HTN (31%), 291 for DLD (73%), and 22 for DM (13%). Chart review of 55 patients showed sensitivity of 100% for CVD, 78% for HTN, and 42% for DLD classification.

Conclusion: An algorithm for classification of CVD has been successfully developed in a representative RA registry. The discrepancy between physician and patient-reported CVD highlights the importance of utilizing information from multiple sources when classifying comorbidities.

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FRI0030 FEELINGS OF GUILT AND SHAME IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: Rheumatoid arthritis (RA) is a chronic inflammatory disease which causes functional disability, pain, and joint destruction. The disease has a major impact on patient's independence, social activities and self-image.

Objectives: The aims of this study were to assess whether RA is associated with increased feelings of shame and guilt, and to examine possible correlates with socio demographic characteristics and disease activity.

Methods: To measure feelings of shame and guilt, in patients with RA (ACR/EULAR 2010), we used the Experience of Shame Scale (ESS) [1] and the Test of Self Conscious Affect- Version 3 (TOSCA-3S) [2].

The ESS is a 25-item questionnaire that assesses the frequency of characterological, behavioral and bodily shame experiences over the past year. Respondents rate each item on a scale ranging from 1 (not at all) to 4 (very much), with higher scores indicating greater shame.

The TOSCA-3S is presented with 11 brief hypothetical scenarios followed by 3 common reactions, which reflect shame, guilt and externalization of blame. Each possible response is rated on a five-point scale from 1(not likely) to 5 (very likely). For the purpose of this study, only the shame and guilt response items were analyzed. Total scores for Shame Self-Talk and Guilt Self-Talk were calculated and compared to the scoring interpretation. A $p<0.05$ was considered significant.

Results: A total of 40 patients with RA were included, 36 women and 4 men, with a mean age of 54.2 years old [25-75]. Nine patients (22%) were illiterate, 42.5% were professionally active and 82.5% were married. The mean disease duration was 12.8 years [3-33], 80% of patients were on prednisone at a daily posology of 7 mg [2.5-12.5], 82.5% were on csDMARDs and 27.5% on bDMARDs. The mean DAS 28 ESR and CRP were respectively 4.3 [1.6-6.9] and 3.6 [1-6.2].

The mean total score of the ESS was 45.3 [27-81] with subscale means of: 19 [12-37] for characterological shame, 19 [10-30] for behavioral shame and 7.4 [4-16] for bodily shame.

For the TOSCA-3S, the mean "shame self-talk Total" score was 33.8 [17-44], and the mean "guilt self-talk Total" score was 48 [37-55], which corresponds to "you often use" for men and "you use an average amount" for women, a shame and guilt self-talk.

A significant correlation was found between disease activity (DAS 28 ESR) and total score of ESS, shame self-talk total score and guilt shame self-talk score ($p=0.000$). A significant correlation was also found between these scores and gender, age, level of education, professional activity and marital status.

Conclusion: Our RA patients experienced general feelings of shame and guilt, which correlate with demographic items and disease activity.

However, a case-control study with a larger population is necessary to determine whether patients with RA express more shame and guilt than their peers without RA.

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FRI0031

ASSESSMENT OF EFFICACY, SAFETY AND IMMUNOGENICITY OF A TRIVALENT SPLIT-VIRUS INFLUENZA VACCINE IN PATIENTS WITH RHEUMATIC DISEASES

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Background: In current rheumatology practice concurrent infections produce significant negative impact on patients' morbidity, mortality and quality of life. Based on WHO estimations the annual incidence of influenza in adult population amounts to 5-10% worldwide. Influenza can lead to hospitalization (3 to 5 million cases per year) and even death (250-500 thousand cases per year). Flu and its complications rates are higher in patients with rheumatic diseases (RD) as compared to general population. Therefore, prevention of influenza should be viewed as integral part of RD population management.

Objectives: To study the safety, efficacy and immunogenicity of inactivated split-virus influenza vaccine in patients with rheumatoid arthritis (RA) and ankylosing spondylitis (AS).

Methods: 126 subjects (90 females and 36 males, aged 22 - 82 y) with recent acute respiratory viral infections (ARVI) and flu episodes in medical records were enrolled, including 52 RA patients, 34 AS patients and 40 healthy volunteers as the control group. 39 RA pts received methotrexate (MTX), 12 - TNF α inhibitors +MTX, 8 - Leflunomide, 2 - abatacept, 2 - sulfasalazine, 1 - tofacitinib + MTX. 19 AS patients were treated with nonsteroidal anti-inflammatory drugs (NSAIDs), 15 -with TNF α inhibitors. The RD duration ranged from 2 months to 46 years. All participants were injected subcutaneously with one dose (0.5 ml) of the trivalent inactivated influenza vaccine containing the actual influenza virus strains, with ongoing therapy. The control visits were scheduled at baseline, and in 1, 3 and 6 months after vaccination (Visits 0, 1, 2 and 3, respectively). Standard clinical and laboratory tests were performed during each visit. Immunogenicity of vaccine was measured with ELISA test kits.

Results: Vaccine tolerability was good in 103 participants (77.4%). Post-vaccination pain, swelling and redness of the skin up to 2 cm in diameter were registered in 20 cases (15%), low-grade fever, myalgia and malaise were documented in 10 cases (7.5%). There was no casual relationship between these reactions and principal therapy, therefore, no modifications of therapeutic regimens were required, and complete resolution occurred within 24 hours without additional interventions. No RD exacerbations or new autoimmune disorders were observed during the FUP. At baseline mean pts' DAS28 and BASDAI scores were 3.56 and 3.85, improving up to 1.99 and 3.09, respectively, 6mo post-vaccination. For the entire FUP there were no cases of influenza or influenza-like illness registered.

The proportion of respondents to the vaccine is 70% in the group of patients with RD and 75% in the main group. The level of humoral immune response was not significantly different in the group of patients with RD and in the control. It is noteworthy that there were no significant differences in the level of post-vaccination response after a month ($p = 0.6$) or after 3 or 6 months of observation. In patients with AS, there were significantly more responses to vaccines in patients with a long duration of the disease and low activity according to the BASDAI index ($p < 0.05$). There was no significant effect of the treatment of RH on the level of post-vaccination response; there were also no differences in the level of post-vaccination response between patients with different RD.

Conclusion: Therefore, our results show good tolerability, efficacy and immunogenicity of inactivated split-virus influenza vaccine in RA and AS patients. Future studies on larger patients' populations are warranted for more complete evaluation of vaccine safety and efficacy.

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FRI0032

HIGH INDEX OF SEDENTARY BEHAVIOR IN PATIENTS WITH INITIAL RHEUMATOID ARTHRITIS: DATA FROM A LONG COHORT OF INITIAL RA

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Background: The abandonment of a healthy lifestyle can have great impact on the quality of life, the response to the treatment and the control of the symptoms, like pain and fatigue on RA patients. Smoking is a proven trigger in the pathophysiology of RA, but studies show that it also participates in inflammatory activity throughout the course of the disease. RA patients are more likely to develop various comorbidities and increased cardiovascular risk when compared to the general population.

Objectives: To access physical activity engagement along with alcohol and cigarette consumption.

Methods: A cross-sectional study was carried out with patients with rheumatoid arthritis who received treatment on the initial stage of RA and followed up during 15 years in an initial RA cohort of a University Hospital. Participants underwent standardized clinical evaluation and analysis of complementary exams. The study was approved by the Ethics Committee.

Results: A total of 107 RA patients were evaluated. In the sample, 98% of the women were found, with a median age of 52 years. The mean duration of illness was 12.8 years and 11.3% had erosive disease. In relation to the habits of life, the physical activity level, prevalence of alcoholism and smoking were investigated. In general, our population was characterized by non- alcohol users (93.5%), non- smokers (75.7%) and not engaged into regular physical activities (56.1%). In relation to frequency, 21.5% of the patients exercised a minimum of three times a week, 16.8% once or twice a week and 5.6% once or twice a month. The practice of physical activity may be difficult for the patient with RA, who often has functional limitations, but is still of great importance, since it improves the response to treatment, prevents the onset of other comorbidities, or worsening of previous diseases, complications and promotes the improvement of the quality of life.

Conclusion: Even with a multidisciplinary approach and health care professionals qualified to instruct and emphasize the importance of engaging on an active lifestyle, RA patients remain mostly sedentary after 15 years of follow up. Perhaps other strategies of intervention should be investigated to improve such habits.

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