Background: Interstitial lung disease (ILD) is an extra-articular manifestation of rheumatoid arthritis (RA) detected in 20% to 60% of patients with RA on high-resolution computed-tomography (HRCT) scan and is clinically significant in near 10%. Despite a high morbi-mortality rate, a definite strategy for preclinical ILD screening in patients with RA remains to be determined. To date, several factors have been reported to increase the risk of RA-ILD occurrence (i.e. older age at RA onset, ACPA positivity, male sex, RA disease activity, the minor allele frequency (MAF) was 22.2% and 10.0% in the RA-ILD and RA-noILD populations, respectively (OR univariate=2.6 CI95% [1.2-5.5], P=0.01). After logistic regression, independent predictors for preclinical RA-ILD were male sex (OR=3.9 CI 95% [1.4-10.4]), older age at RA onset (OR=1.1 per year CI95% [1.0-1.2]), mean DA8 score during the follow-up (OR=2.0 CI95% [1.2-3.4]) and MUC5B rs35705950 T risk allele (OR=3.7 CI95% [1.4-10.4]) (Figure 1). No influence of the use of RA-related drugs (prednisone, MTX or bDMARDs) was identified as risk factor. The logistic model could predict preclinical ILD occurrence after 13 years of RA duration with an AUC=0.82 CI95% [0.72-0.91]. A predictive score for preclinical RA-ILD based on the 4 identified predictive risk factors was developed (Sensitivity 80%, Specificity 96%).

Conclusion: In this cross-sectional study of the prospective ESPOIR cohort, we identified clinical and genetic predictors for ILD after 13 years of RA duration. We developed a predictive score that could improve risk stratification for preclinical RA-ILD and help physicians identify patients with RA in whom a HRCT scan should be performed.

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Background: Patients with the rheumatoid arthritis (RA) have an increased risk of cardiovascular disease (CVD) compared to general population. However there are insufficient modality to predict future CVD risk in RA.

Objectives: This study assessed whether splenic and arterial activity measured by positron emission tomography/computed tomography (PET/CT) predict the risk of CVD thrombosis events beyond conventional risk factors in patients with RA.

Methods: We enrolled 84 patients with active RA who underwent fluorine-18-fluorodeoxyglucose (FDG) PET/CT and disease activity evaluation at the same time. CVD thrombosis events were independently evaluated, while blinded to activity of PET/CT, during follow up periods. FDG uptake by nuclear medicine physi- cian was examined in the spleen and ascending aorta. TBR was defined as superior vena cava as SUV (standardized uptake values) and target-to-back- ground-ratio (TBR) while blinded to CVD events.

Results: During follow-up periods, 19 patients developed CVD thrombosis events. Both splenic and arterial TBR were significantly increased in patients with subsequent CVD events compared to in patients without (2.19 ± 0.80 vs 1.80 ± 0.34, p < 0.013, 1.72 ± 0.22 vs 1.57 ± 0.22, p < 0.012). Splenic TBR was associated with an increased risk of CVD events after adjustment for conventional CVD risk factors (hazard ratio: 3.15; 95% confidence interval (CI): 1.46 to 6.79; p = 0.003). Moreover, the association between splenic TBR and CVD events remained significant after adjustment for disease activity (HR: 3.00; CI: 1.30 to 6.33; p = 0.007) and after adjustment for arterial TBR (HR: 1.30; CI: 1.30 to 6.33; p = 0.007).

Conclusion: Our results show splenic metabolic uptake in FDG-PET/CT in patients with RA provide information for subsequent CVD events beyond conventional risk factors.

References:

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POS0098

THE INFLUENCE OF THE ACTIVITY OF RHEUMATOID ARTHRITIS TO INFECTIOUS AND WOUND ARROPLASTY

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Background: Surgical treatment of patients with rheumatoid arthritis (RA) is associated with an increased risk of complications. This is due to the presence of inflammation, many variants of the disease, reduced physical activity, severity of functional disorders, prolonged therapy with glucocorticoids, disease-modifying antirheumatic drugs (DMARDs) and biological DMARDs, osteoporosis, as well as activity of the underlying disease.

Objectives: to conduct a comparative analysis of the influence of RA activity levels on infectious complications (perioperative infection) and wound complications (poor healing, divergence, necrosis of the wound edges) after hip and knee arthroplasty in RA patients.

Methods: 1113 arthroplasties were analyzed in patients with RA, which were performed between 2002 and 2019. Of these, 649 total knee arthroplasties and 464 hip arthroplasties were performed.

Results: Infectious complications after total hip and knee arthroplasty did not occur at 0 grade of disease activity (remission). At the I grade of activity, peri- infectious infections were detected with a frequency of 0.31%, at the II grade - 0.89%, and at the III level in 0.06% of cases. Complications from the operative wound occurred in 0.91% of cases with I grade of activity, at II grade with a frequency of 5.68%, and at III – 9.88%. There were no complications from the wound in patients with remission of RA. Statistical analysis of the obtained data revealed a significantly higher number of complications in the group of RA patients (p<0.005). During analyzing each type of complication, significant differences were also obtained (p<0.005).

Conclusion: Risk of perioperative infection and complications from the wound in patients with RA is higher in patients with a high grade of RA activity. This means that performing arthroplasty as well as other operations, in patients with high RA activity correlates to a high risk of complications.

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POS0099

CLINICAL REMISSION IN RHEUMATOID ARTHRITIS IS TREATED WITH A LOW Baseline EXPRESSION OF Genes RELATED TO ENERGY METABOLISM AND WITH CELLULAR CAPACITY OF THEIR UPREGULATION DURING FOLLOW-UP

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