Objectives: To determine the serum levels of Dkk-1 and their relationship with active and chronic changes in SIJ on MRI, indices and laboratory parameters of disease activity and functional status in SpA patients.

Methods: This study includes 105 SpA patients (89.5% HLA B27 positive) and 15 healthy age- and gender- matched controls. Dkk-1 serum levels (pmol/l) were conducted by ELISA. Active inflammatory lesions in SIJ were evaluated by Spondyloarthritis Research Consortium of Canada (SPARCC) MRI SIJ score (0-72, n=69) and chronic changes by Danish scoring method (0-48). Bath Ankylosing Spondylitis Disease Activity Index (BASDAI, mm), Bath Ankylosing Spondylitis Functional Index (BASFI, mm), C-reactive protein (CRP, mg/l) and erythrocyte sedimentation rate (ESR, mm/hr) were recorded. Statistical analysis was performed using Spearman correlation coefficient, Student t-test and receiver operating characteristic (ROC) curves.

Results: Mean value ($M \pm \sigma$) of Dkk-1 was 45.1 ± 36.3 . The mean value of indices and laboratory parameters were: BASDAI – 44.5 ± 19.3 , BASFI – 31.1 ± 23.1 , CRP – 20.6 ± 31.3 , ESR – 26.8 ± 22.0 . SPARCC score was 22.2 ± 12.0 , Danish score – 19.5 ± 9.83 . Dkk-1 serum levels were lower ($P < 0.01$) in SpA patients compare with the controls. ROC analysis indicated that the AUC for Dkk-1 is 0.88 ± 0.05 ($p < 0.001$), which indicates strong capacity to differentiate groups of SpA patients with healthy controls (sensitivity - 87%, specificity - 79%).

There was significant negative correlation between Dkk-1 with chronic lesions in SIJ by Danish score ($r = -0.250$, $p = 0.046$). Dkk-1 showed positive correlation with CRP ($r = 0.216$, $p = 0.028$).

There was no significant correlation of serum Dkk-1 levels with SPARCC, BASDAI, BASFI and ESR.

Conclusion: Dkk-1 levels are significantly lower in SpA patients compare with healthy controls and has a strong association with SpA. Dkk-1 significantly negatively correlates with chronic changes in SIJ on MRI, that may confirm that deficiency of Dkk-1 could increase progression of pathological changes in SIJ. Dkk-1 correlates only with CRP level, but none of the other indices and laboratory parameters of disease activity and functional status.

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THU0405

PREVALENCE OF FIBROMYALGIA IN INFLAMMATORY BOWEL DISEASE (IBD) PATIENTS: A SINGLE CENTRE OBSERVATIONAL PROSPECTIVE STUDY

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Background: Joint pain is frequently reported by IBD patients and can be associated to extra-intestinal manifestations of diseases or adverse events associated to anti-TNF or vedolizumab therapy and also associated with other non-SpA-disease related factors including mechanical/degenerative problems. An appropriate rheumatological referral pathway is crucial to drive therapeutic strategy in case of concomitant spondyloarthritis (SpA). Fibromyalgia is a frequent cause of chronic pain that needs to be identified in order to not overestimate the prevalence of SpA in IBD patients

Objectives: The aim of the study was to assess the prevalence of FM in a cohort of IBD outpatients

Methods: Consecutive patients of the IBD Unit coming for a routine visit were screened by a rheumatologist in order to identify cases presenting the 2010 ACR criteria for FM or ASAS criteria for SpA (1,2). Patients affected by other rheumatic conditions such as rheumatoid arthritis and crystal arthritis were excluded from the study. The rheumatological assessment included a 66 swollen joint count (SJC) and 68 TJC, MASEI, LEI and the fibromyalgia tender points examination. The patient completed BASDAI and BASFI on the day of clinical evaluation. Imaging exams (MSK ultrasound, MRI) and HLA-B27 determination were requested if needed for diagnostic confirmation

Results: Between January to May 2018, 210 patients were enrolled in the study and 181 completed the clinical and imaging/laboratory assessment if requested for diagnostic purpose. examination. A total of 44 patients (24.3%) in the IBD cohort met the ACR 2010 criteria for FM. 34 patients (18.8%) presented the criteria for primary FM, and 10 patients (5.5%) presented FM and SpA. Of note FM patients presented LEI; BASDAI and BASFI scores higher than SpA patients

Conclusion: FM is a common comorbidity in IBD patients and can be associated to SpA. An appropriate rheumatological referral is crucial to exclude a concomitant SpA and to manage FM

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THU0406

ULTRASONOGRAPHIC INVOLVEMENT OF THE ANTERIOR CHEST WALL IN SPONDYLOARTHRITIS, A FIVE YEARS FOLLOW UP STUDY

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Background: Spondyloarthritis is characterized by inflammatory back pain. Anterior chest wall pain is common and a previous study reported a prevalence à 37% of ultrasonographic lesions of this anatomical region [1].

Objectives: The objective of this study is to evaluate, in patient with Spondyloarthritis, the prevalence of ACW ultrasonographic lesions after a follow up of 5 years and to identify factors associated with the development of new lesions.

Methods: This a monocentric and prospective study including patients with Spondyloarthritis meeting the ASAS 2009 criteria. Patients were followed during five years. ultrasound B mode and power Doppler examination of the two sternoclavicular joint and the manubrio-sternal joint were performed by the same two examiners at baseline and five years later. The presence of erosion, synovitis, ankylosis, power Doppler signal, joint effusion and bone margin narrowing were assessed. Clinical characteristics and disease activity were evaluated at 5 years.

Results: In the 136 patients at baseline, 58 patients were evaluated 5 years later. The mean age was 48.2 ± 11.9 years old, with 86% male and 89% HLA B27. 60.3% of these patients had a history of pain of the ACW. The prevalence of ultrasonographic involvement of the ACW was 34% at baseline and 67.2% five years later. The most frequent lesions were ankylosis of the manubriosternal joint (38%) and erosions of the sternoclavicular joint (29%). At 5 years, patients with lesions of the ACW are significantly older (51.4 ± 11.5 VS 41.5 ± 9.98 , $p < 0.01$). There were no differences concerning the presence of HLA B27 and the presence of a radiographic sacroiliitis or syndesmophytes. Among these 58 patients, 31 (53%) developed a new lesion of the ACW. There is a statistically significant association between a higher ASDAS CRP and new lesions of the ACW (1.86 ± 1.07 VS 3.0 ± 2.17 $p < 0.01$) and with the level of CRP (5.34 ± 7.85 VS 16.2 ± 35 , $p = 0.035$). Baseline ASDAS CRP is not a predictor of new chest wall lesions prior to 5 years of age. Nevertheless, poor control of disease activity is associated with the development of new lesions. Patients with new lesions have an ASDAS CRP score that increase (0.882 ± 2.48) between 2013 and 2018, while patients with no new lesions have an ASDAS CRP score that decrease (-0.641 ± 1.50) between 2013 and 2018.

Conclusion: The prevalence of ultrasonographic lesions of the ACW increased after 5 years of follow up. The development of new lesions is associated with a higher disease activity, a higher CRP and an increased disease activity over 5 years.

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