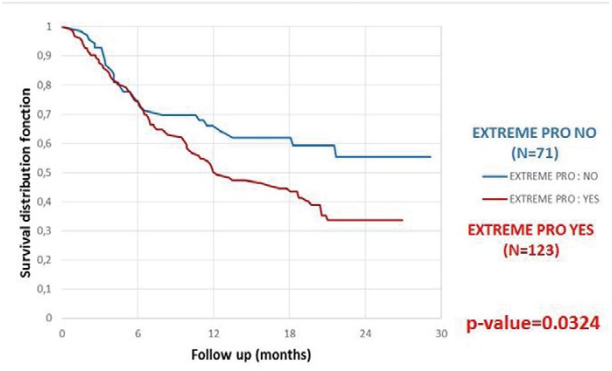

Figure 1. Impact of extreme PRO on first TNF-α blocker retention rate (first 2years) [Kaplan Meier curves and Log Rank test]

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SAT0387 "DO NOT DO" RECOMMENDATIONS IN THE MANAGEMENT OF COMORBIDITY IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS. GECOAX PROJECT

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Background: During the development of recommendations and implementation aids of the GECOAx project, the importance of avoiding certain situations was highlighted.
Objectives: To recognize what prescriptions, risk assessments, or preventive strategies are wrong practices and should thus be avoided in clinical practice. To establish not to do recommendations in the management of the comorbidity of AxSpA.
Methods: A multidisciplinary group was selected [10 rheumatologists, 1 internist, 1 cardiologist, 1 gastroenterologist, 1 psychologist and 2 family physicians]. With the support of 3 methodologists, and after interactions aimed to edit a document for the management of comorbidity launched by the same panel, a list of Not to do recommendations was issued. In a discussion meeting, evidence was provided to support the recommendations, items without sufficient basis were removed, and the final list was produced.
Results: A summary list of Not to do recommendations (Table 1) was issued.

Table 1

– DO NOT prescribe NSAIDs to patients with high cardiovascular (CV) risk and particularly with hypertension.
– DO NOT prescribe NSAIDs to patients with CKD, heart failure or liver cirrhosis and, if necessary, exert caution.
– DO NOT use CV risk scores in patients who already suffered a CV event or those with multiple risk factors (smoking, obesity, sedentary lifestyle, DM, hypertension, dyslipidemia) or a family history of premature CV disease; All should be considered high CV risk.
– DO NOT base renal disease screening on a single glomerular filtration test and/or albuminuria (ALWAYS should be confirmed); serum creatinine should not be used as the only test to evaluate renal function.
– DO NOT administer biological therapy in case of active, serious and uncontrolled infection, sepsis or risk of sepsis or tuberculosis or without a previous screening of chronic HBV, HCV, HIV and TB.
– DO NOT repeat HBV vaccination unless HBV antibody levels are not achieved.
– DO NOT vaccinate a patient in therapy with biological agents or in immunosuppressive treatment with live viruses

Conclusions: These recommendations aim to avoid making common mistakes in clinical practice and to help better management of frequent comorbidity in patients with AxSpA.
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SAT0388 ANALYSIS OF THE MUSCULOSKELETAL MANIFESTATIONS IN INFLAMMATORY BOWEL DISEASE PATIENTS AND ITS RELATIONSHIP WITH BIOLOGICAL TREATMENT

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Background: Crohn's disease (CD) and ulcerative colitis (UC) are the main entities of inflammatory bowel disease (IBD). Both present extraintestinal manifestations that do not always depend on the IBD activity. The most common manifestations involve the musculoskeletal system and they are included in the seronegative spondiloarthritis group. If there is active or known IBD, treatment of this is priority because it usually improves joint disease. However, joint disease can also have an independent course of the intestinal manifestations as in patients with IBD and ankylosing spondylitis (AS).
Objectives: To analyze the prevalence of extraintestinal manifestations in IBD patients and treatment provided.
Methods: Retrospective observational analysis of IBD patients that have been remitted to the rheumatology department of HUP La Fe with musculoskeletal manifestations. Demographic, clinical and treatment data of patient were collected. Biostatistical analysis with R (3.3.2.) was performed.
Results: We recruited 183 patients diagnosed with IBD (57.4% women), 117 with CD and 66 with UC, with a mean age at diagnosis of 37.03±14.02 years old. 29 of them have axial affection and 51 peripheral affection, and simultaneously in 22 cases. We observed no statistical differences in axial or peripheral affection according to the IBD diagnosis. 79 cases were on biological therapy, and these treatments were conducted by Rheumatology in the 44% of cases and by Digestive Department in the 66% of cases. We observed that patients with axial affection present higher probability that the treatment has been conducted by Rheumatology (P=0.007), and broken down axial affections AS diagnosis had the most probability to be conducted by Rheumatology (n=36 P=0.0102). Related to peripheral manifestations, uveitis diagnosis had the most probability to be conducted by Rheumatology (n=14 P=0.0337).
Conclusions: In our patient series with IBD and musculoskeletal manifestations, the most common were peripheral affection. Among patients with IBD and axial and/or peripheral manifestation, 44% were conducted by Rheumatology, and are cases with axial predominance, where IBD treatment does not improve musculoskeletal disease and a primary spondyloarthritis treatment is needed.
Disclosure of Interest: None declared
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SAT0389 COMPARISON OF ANKYLOSING SPONDYLITIS AND NON-RADIOGRAPHIC AXIAL SPONDYLOARTHRITIS IN A MULTI-ETHNIC ASIAN POPULATION OF SINGAPORE

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Background: The relationship between non-radiographic axial spondyloarthritis (nr-axSpA) and ankylosing spondylitis (AS) is currently debated. Till date, there is no study exploring the differences between AS and nr-axSpA in Asia.
Objectives: The primary objective of this study was to compare clinical characteristics, disease activity, patient-reported outcomes and associated co-morbidities between patients with AS and nr-axSpA in a multiethnic Asian population of Singapore.
Methods: All patients fulfilled 2009 ASAS classification criteria for axial SpA. Of these, all AS patients fulfilled the modified New York criteria. AS and nr-axSpA patients were retrieved from the PREcision medicine in SPONdyloarthritis for Better Outcomes and Disease Remission (PRESPOND) registry in Singapore General Hospital. Patients were followed up over 2 years. Baseline characteristics, medications, disease activity, patient-reported outcomes and inflammatory markers prior and 6 months post treatment were recorded using standardized questionnaires.
Results: 262 AxSpA patients (82% Chinese, 79% males) were included. Current mean age (S.D.) was 41.7 (13.7) years, mean age of diagnosis was 31.7 (12.5) years, mean length of disease was 10.1 (8.3) years and body mass index was 24.7 (6.3) kg/m^2, which was similar between AS and nr-axSpA patients. AS patients were older [mean age 42.7 (13.5) vs 37.4 (13.8) years, p=0.02], had longer disease duration [mean disease duration 10.9 (8.7) vs 6.4 (4.8) years, p<0.01], more frequently HLA-B27 positive (82% vs 68%, p=0.03), associated with uveitis (33% vs 17%, p=0.03), and hypertensive (17% vs 0%, p<0.01) compared to nr-AxSpA respectively. nr-axSpA patients had higher BASDAI [mean BASDAI 4.2 (1.6) vs 3.5 (1.9), p=0.02], BAS-G [mean BAS-G 4.7 (1.7) vs 3.9 (2.1), p<0.01] and ASQOL [mean ASQOL 4.9 (4.8) vs 3.5 (4.1), p=0.04] scores

compared to AS patients respectively at baseline. Peripheral arthritis, enthesitis, dactylitis, psoriasis, inflammatory bowel disease, hyperlipidemia, cardiac disease, diabetes mellitus, patient global assessment, BASFI, HAQ and SF-36 physical component summary and mental component summary were similar in both groups at baseline. Mean BASDAI, BAS-G, patient global assessment, HAQ and SF-36 physical component summary and mental component summary scores were similar at 12 months between both groups, except for BASFI, which was higher in AS patients ($p<0.001$). Medications used were similar between AS and nr-AxSpA patients (81% of axial SpA patients were on NSAIDs, 31% on concomitant DMARDs and 14% on biologics). Mean erythrocyte sedimentation rate and C-reactive protein were similar between both groups at baseline and 12 months post treatment.

Conclusions: In our multi-ethnic Asian cohort, patients with AS are more likely to be HLA-B27 positive, have uveitis, hypertension, and poorer physical function despite therapy; whilst nr-axSpA patients have higher baseline disease activity scores and tend to experience poorer well-being and quality of life. Although both groups represent different aspects of the same disease, they respond similarly to treatment.

Disclosure of Interest: None declared

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SAT0390 DIFFUSION WEIGHTED IMAGING (DWI) IS MORE USEFUL THAN SHORT TAU INVERSION RECOVERY (STIR) SEQUENCE IN DIAGNOSIS OF NON-RADIOGRAPHIC AXIAL SPONDYLOARTHRITIS (SPA) AND BOTH SEQUENCES ARE PARTICULARLY USEFUL IN EARLY DISEASE STAGE

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Background: Diffusion weighted imaging (DWI) is a new Magnetic Resonance Imaging (MRI) sequence proposed for spondyloarthritis (SpA) diagnosis. Whether it is more useful than the traditional short tau inversion recovery (STIR) sequence in disease diagnosis had not been evaluated.

Objectives: By comparing with traditional STIR sequence in a group of back pain patients newly referred to rheumatology clinics, we evaluated the usefulness of DWI in SpA diagnosis at different stages.

Methods: All new patients referred to the rheumatology clinics with persistant back pain were recruited. DWI and STIR MRI were performed. Conventional radiographs of the pelvis were assessed according to the modified New York criteria for ankylosing spondylitis. Bone marrow edema (BME) and active sacroiliitis according to the ASAS definition were evaluated in STIR and DWI by two independent observers.

Results: One hundred and thirty-three patients were recruited. Ninety patients (67.7%) had a clinical diagnosis of SpA. Average back pain duration was 8.5±8.9 years. The presence of Human Leukocyte Antigen (HLA) B27 was found in 42.9% of the study population. Inter-observer correlations were excellent (STIR 95.4%, $p<0.001$; DWI 69.5%, $p<0001$). DWI was found to be comparable to STIR in disease diagnosis (sensitivity DWI 34.1% vs STIR 34.3%; specificity DWI 85% vs STIR 93.8%) and when applied to the Assessment of SpondyloArthritis international Society (ASAS) criteria for axial SpA (sensitivity DWI 78.9% vs 79.5%; specificity DWI 75.0% vs 78.8%). DWI is better than STIR in non-radiographic axial SpA group (sensitivity DWI 37.8% vs STIR 33.8%; specificity DWI 85.3% vs STIR 95.6%). In the group with disease duration less than 3 years, the two images showed improved sensitivity (sensitivity DWI 34.5% vs STIR 41.4%; specificity DWI 84.6% vs STIR 88.5%).

Conclusions: DWI is useful in SpA diagnosis especially in non-radiographic axial SpA group. Both DWI and STIR are especially useful for early disease diagnosis.

Disclosure of Interest: None declared

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SAT0391 LUMBAR FLEXION/RELAXATION PHENOMENON IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS

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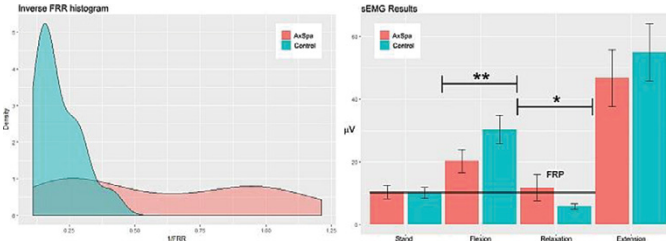
Background: Surface electromyography (sEMG) has been used in several studies to assess muscle activity in patients with low back pain (LBP). It has also been analyzed the lumbar flexion-relaxation phenomenon (FRP) defined by reduced lumbar erector spinae (ES) muscle myoelectric activity during full trunk flexion in healthy individuals, through the flexion relaxation ratio (FRR). In LBP patients, this relaxation, compared to the peak reached at the flexion phase, is smaller and even non-existent. There are very few studies that analyze this effect in patients with Axial Spondyloarthritis (axSpA).

Objectives: To evaluate muscular activity at the erector spinae using sEMG in patients with axSpA to analyze FRP.

Methods: 39 subjects were included: 25 patients with axSpA (49.3±5.6 years, 75% men) and 14 healthy subjects (46.7±8.7 years, 71% men) as control group. Demographic data, conventional metrology, advanced metrology using motion capture (UCOTrack) and PRO questionnaires were collected. Electrodes were placed on left and right side, at L4-L5 level and separated 2cm from the spinous process, on the ES. Muscle activity values were obtained in 4 phases (standing, flexion, relaxation and extension). With the values of flexion and relaxation, the FRR index and its inverse 1/FRR were calculated. Student t tests were used for differences between groups.

Results: There were no significant differences between the right and left sides of the measurements at ES, so mean values were considered for the analysis. There were also no significant differences in age and gender between the control group and patients. Results obtained in each of the phases are shown in the graph. The FRP appeared in healthy individuals, but not in patients, as show the FRP line in the graph: in axSpA, sEMG values at the Flexion phase are above values at the stand phase, and in control group is the opposite, so there is a truelly relaxation. There were significant differences between patients and control group in flexion, relaxation, and in the FRR and 1/FRR ratios. 1/FRR presented better correlations with several parameters (age, lateral flexion, Schöber, BASMI, BASFI, UCOASMI, BASG, all with $p<0.01$), but not with activity indexes (BASDAI, ASDAS). Distribution of 1/FRR values and results of sEMG between group (** $p<0.01$, * $p<0.05$) are shown at the chart. The area under a ROC curve to discriminate healthy patients using 1/FRR was 0.85 (95% CI 0.72–0.96 $p<0.001$).



Conclusions: In our study, there were differences between healthy and patients with axSpA in the FRP, as in other studies with LBP patients. The 1/FRR index shown the best results in correlation with other parameters and it was where major differences between groups appeared. There was good correlation with the patient global score (BASG) and with the functional BASFI index, so assessment with sEMG could be an objective and quantitative test to evaluate the patient's functional status. It would be very interesting to analyze, in future studies, the sensitivity to change to treatments which would give us a good indicator to assess their effectiveness.

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Disclosure of Interest: None declared

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SAT0392 THE DIAGNOSTIC ACCURACY OF EXISTING GRADING CRITERIA OF SACROILIAC JOINT CT IN ANKYLOSING SPONDYLITIS

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Background: Imaging modalities are essential for the diagnosis of ankylosing spondylitis (AS) due to the absence of specific clinical manifestations. Sacroiliac Joint (SIJ) CT has been used to identify sacroiliitis for decades with a higher diagnostic accuracy than radiography in detecting structural changes, and not reducing the specificity like MRI. However, no well-accepted grading system for SIJ CT existed.

Objectives: We evaluated the diagnostic accuracy of existing grading criteria of sacroiliitis, aiming to provide references for future better reading of SIJ CT in AS.

Methods: A total of 2714 patients who had received CT scanning for any reasons with complete SIJ structures displaying between June 2012 and December 2015 were included. The CT scans were read by 2 rheumatologists together who had received professional training in radiology. Patients with sacroiliitis were selected and bilateral SIJs of each patient were evaluated separately by the 1984 modified New York (mNY) criteria, the criteria proposed by Lee (Lee criteria)[1] and the criteria from Innsbruck workshop report (Innsbruck criteria)[2], respectively. The grading differences among these criteria were analyzed.

Results: Amount to 509 patients were detected having sacroiliitis with an average age of 34 years and 64% of male. Among 1018 SIJs of these patients, 45 SIJs graded 1∼3 by mNY criteria were graded 0 by Lee criteria, indicating the better specificity of Lee criteria. Lee criteria was much more convenient and reliable than mNY criteria for its more explicit definitions. The SIJs with definite sacroiliitis estimated by mNY and Lee criteria were 79.37% and 82.91%, respectively, and simply divided into grade 3 or grade 4. Conversely, 85.27% SIJs were identified as definite sacroiliitis and classified into 5 grades, from grade IIB to grade IVB, by Innsbruck criteria, and the percentages of each grade were 8.94%, 26.82%, 20.92%, 10.12% and 18.47%, respectively, which means a higher discrimination capability than the other two criteria. Other than graded by the extent of lesions in mNY criteria or Lee criteria, the grading assessment by Innsbruck criteria was based on the lesion types, which was more consistent with the natural progression of sacroiliitis.