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Background: Hip joint lesion are the main cause of disability in patients with Ankylosing Spondylitis (AS) in western China. Seriously affect the quality of life of patients. The early clinical characteristics of hip joint disease are not typical, the disease is insidious, and the radiological diagnosis is delayed. The main prevention is early screening and early diagnosis.

Objectives: This study attempted to find out the main characteristics and related factors in different groups of AS combine with hip joint lesion in western China.

Methods: A-First evaluation: How many patients have 1) active SIJ changes on MRI; 2) chronic SIJ changes (each for erosion, sclerosis, ankylosis, or any of those) on MRI; 3) a combination of active changes and chronic changes (each for erosion, sclerosis, ankylosis, or any of those) on MRI; 4) active hip changes on MRI; 5) chronic hip changes (erosion, effusion any of those) on MRI; 6) a combination of active changes and chronic hanges (erosion, effusion any of those) on MRI. B-Then, combination SIJ / hip. 7) active SIJ changes on MRI and in parallel active hip changes on MRI. 8) chronic (see above) SIJ changes on MRI and in parallel hip (see above) SIJ changes on MRI. 9) chronic (see above) SIJ changes on MRI and in parallel chronic (see above) SIJ changes on MRI. 10) chronic (see above) SIJ changes on MRI and in parallel any (active or chronic) hip changes on MRI. C-Then, characterization of these groups with no-imaging findings. Characteristics of groups 7-10 above, for age, sex, Disease duration, Hip pain, Joint pain, enthesitis, Diarrhea, uveitis, ASDAS-CRP, BASFI, BASMI, Pat. Global, CRP, ESR, Harris Score. HLA-B27.

Results: Retrospective analysis total 558 SpA patients (mean age 29, mean duration 5 years). 1) HIP-Active+Chronic group (N=228, AS=151) vs SIJ+HIP-Active group (N=241, AS=138): hip pain (p<0.0001), diarrhoea (p<0.0001), joint pain (p<0.0001) and BASFI (p<0.05); 2) HIP-Active+Chronic(N=117, AS=58) vs SIJ-Chronic+HIP-Active group (N=214, AS=134): hip pain (p<0.0001), joint pain (p<0.0001), enthesitis (p<0.0001), ASDAS-CRP (p<0.05) and ESR (p<0.05); 3) SIJ-Chronic+Group (N=204, AS=125) vs SIJ-Chronic+HIP-Active group (N=214, AS=134): hip pain (p<0.0001), joint pain (p<0.0001); 4) SIJ-Active+Chronic group (N=204, AS=125) vs SIJ-Chronic+HIP-Active group (N=214, AS=134): hip pain (p<0.0001), joint pain (p<0.0001); 5) SIJ-Chronic+Group (N=204, AS=125) vs SIJ-Chronic+HIP-Active group (N=214, AS=134): hip pain (p<0.0001), joint pain (p<0.0001), Pat. Global (p<0.05); 5) SIJ-Chronic+HIP group (N=241, AS=138) vs SIJ-Chronic+HIP-Active group (N=214, AS=134): HLA-B27 positive (Chi-square, df=24, 98, 4) (p<0.0001); 6) SIJ+HIP-Chronic group (N=72, AS=40) vs SIJ-Chronic+HIP-Active group (N=228, AS=144): Pat. Global (p<0.05), ESR (p<0.05).

Conclusion: Hip joint lesion are closely related to sacroiliac joint lesion and HLA-B27 positive in AS. Hip pain is the main clinical manifestation of hip joint lesion in AS. Hip joint lesion may lead to function declines, disease activity in AS.

References:

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TIM-3-EXPRESSING NEUTROPHILS AS A NOVEL INDICATOR TO ASSESS DISEASE ACTIVITY AND SEVERITY IN ANKYLOSING SPONDYLITIS
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Background: Ankylosing spondylitis (AS) is a type of chronic inflammatory disease that compromises the axial skeleton and sacroiliac joints. Many studies have shown that neutrophils play an important role in the inflammatory process of AS. However, the immunomodulatory roles and mechanisms of neutrophils in AS are poorly understood. T-cell immunoglobulin and mucin domain-containing protein (TCIM) is a newly identified member of the immunoglobulin superfamily that is expressed on the surface of neutrophils. The expression of TCIM has been reported to be positively correlated with the disease activity of AS. Therefore, we hypothesized that TIM-3 expressions on neutrophils in AS patients may be a potential indicator for disease activity and severity. The present study investigated whether TIM-3 expression on neutrophils correlates with disease activity and severity in AS patients.

Methods: A total of 208 AS patients and 113 healthy subjects were enrolled in the study retrospectively. TC, HDL-c, LDL-c, TC/HDL-c, TG, CRP, C-reactive protein (CRP), erythrocyte sedimentation rate (ESR), Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) were collected. AS patients were divided into remission axSpA group (BASDAI≤4, n=123) and active axSpA group (BASDAI>4, n=85). Relationships between the parameters were assessed by the Spearman’s correlations analysis. Receiver operator characteristic (ROC) curves were used to discriminate axSpA patients from healthy subjects and active axSpA group from remis- siot axSpA group.

Results: TC, HDL-c, and TG in axSpA group were lower than those of control group, while TC/HDL-c was higher (P<0.05). ROC curve results showed that the AUC value of HDL-c for axSpA was 0.790 (CI95%: 0.740-0.839), yielding a highest AUC value. The optimal cutoff value of HDL-c for axSpA was 1.095, with the Youden index of 0.496, sensitivity of 65.5% and specificity of 84.1%. HDL-c was negatively correlated with BASDAI (r=-0.196, P=0.022), while BASFI was positively correlated with BASDAI (r=0.183, P=0.008). Besides, TC/HDL-c, CRP, ESR in active axSpA group were higher than those of remission axSpA group, while HDL-c was lower (P<0.05). ROC curve results showed that the AUC value of TC/HDL-c and CRP for active axSpA group were 0.621 (CI95%: 0.543-0.700) and 0.634 (CI95%: 0.556-0.712), yielding a higher AUC value than other parameters. The optimal cutoff value of TC/HDL-c for active axSpA group was 4.429, with the Youden index of 0.201, sensitivity of 40.2% and specificity of 79.9%.

Conclusion: HDL-c was decreased in axSpA patients with a highest diagnostic value, compared with healthy control. TC/HDL-c was elevated in active axSpA patients, showing a significant correlation to the disease activity of axSpA.