Conclusion: Demographic and clinical factors differentiate axSpA from nr-axSpA patients. Diagnostic delay was higher in rad-axSpA compared with nr-axSpA despite the same treatment. Some lesions of spine/SI at CR and MRI, and psoriasis, were mostly associated with diagnostic delay and sex.

Disclosure of Interests: None declared

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AB1086 POWER DOPPLER AND SPECTRAL DOPPLER ULTRASOUND IN SUSPECTED ACTIVE SACROILIITIS: A COMPARISON WITH MAGNETIC RESONANCE IMAGING AS GOLD STANDARD

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Background: SIJ involvement is a characteristic feature of Spondyloarthritides (SpA). Magnetic Resonance Imaging (MRI) has been included in the new Assessment of SpA International Society (ASAS) criteria for the classification of Axial SpA. Gray scale US, Color Doppler ultrasound (CDUS), contrast-enhanced CDUS, and spectral Doppler (SD) US has been used in few works to evaluate the inflammatory activity of the SIJ with not conclusive results. Power Doppler ultrasound (PDUS) was not yet applied to the study of SIJ with active SI.

Objectives: The aim of this work was to study with PDUS and SD US the SIJ of patients with suspected active SI, to describe inflammatory flows with spectral wave analysis (SWA) in duplex Doppler US, and to correlate US data with clinical characteristics and the presence of bone marrow edema (BME) in MRI.

Methods: 22 patients (18 females and 4 males, mean age 35 years) with new onset of inflammatory back pain (IBP), were included. Every patient underwent an US examination in prone position. The sonographers were blinded to the clinical data of the patient. A Esato Twice US machine, equipped with a convex multifrequency 1-8 MHz probe, was used, with standardized parameters: 1-5 MHz for gray scale, 1.9-2.3 MHz frequency for Doppler with Pulse Repetition Frequency (PRF) of 10 KHz and a color gain just under the artifact limit. SIJ was located as the hypoecholic triangle delimited between the sacrum and iliac bone, and the posterior SI ligament as the upper margin. The first sacral foramen was always localized to avoid measurement of the normal pre-sacral arteries. The PDUS was applied, and if any signals were detected in the SIJ, they were scored with a 3-points scale: 0= absence of signals, 1= isolate vessels, 2= more than one vessel. The signals were also classified as intra-articular or peri-articular. The same vessels were also evaluated using quantitative SD calculating an US examination in prone position. The sonographers were blinded to the clinical data of the patient. A Esato Twice US machine, equipped with a convex multifrequency 1-8 MHz probe, was used, with standardized parameters: 1-5 MHz for gray scale, 1.9-2.3 MHz frequency for Doppler with Pulse Repetition Frequency (PRF) of 10 KHz and a color gain just under the artifact limit. SIJ was located as the hypoecholic triangle delimited between the sacrum and iliac bone, and the posterior SI ligament as the upper margin. The first sacral foramen was always localized to avoid measurement of the normal pre-sacral arteries. The PDUS was applied, and if any signals were detected in the SIJ, they were scored with a 3-points scale: 0= absence of signals, 1= isolate vessels, 2= more than one vessel. The signals were also classified as intra-articular or peri-articular.

The study is ongoing, with whole body [18F]Fluoride PET-CT scans available in five AS patients and eight PsA patients. In 4/5 AS scans, at least (≥1) PET positive lesions were found in the cervical, thoracic and/or lumbar vertebrae. These were mainly found in anterior corners of vertebrae and bridging syndesmophytes (Fig. 1A). In all eight PsA patients, at least 1 PET positive lesion was visualized, projected either at the site of a tendon attachment (fascia plantaris, achilles- and patella tendon (Fig 1B)) or peri-articularly (in the ankle or wrist).