**Background:** Enthesitis is an important feature of anklyosing spondylitis (AS) and structural and inflammatory enthesal lesions (EL) are frequently present on ultrasound. Plain radiographs also provide good imaging of structural enthesal involvement. Until now, little is known about the presence of structural EL at the hip and pelvic region and the association with patient characteristics in AS.

**Objectives:** Our aim was to investigate the prevalence of radiographic EL at the hip and pelvic region in AS patients compared to age and sex matched control subjects and to explore the relation with AS patient characteristics.

**Methods:** AS patients from the Groningen Leeuwarden Axial SpA (GLAS) cohort, included between November 2004 and December 2010, with available anteroposterior (AP) pelvis radiographs at baseline were included. All patients fulfilled the modified New York criteria for AS. Additionally, 100 randomly selected AP pelvis radiographs from age and sex matched control subjects were obtained from the radiology department of the University Medical Center Groningen. The sacroiliac joints of all radiographs were blinded and radiographs were scored independently by two trained observers unaware of patient characteristics and treatment. The enthesal sites scored were: trochanter major, trochanter minor, os coccygis, os ischiun, crista iliaca, both left and right side. The following 3 EL were scored: erosion/cortical irregularity, calcification and enthesophyte. Only lesions with absolute agreement between both observers were used for analyses. Radiographic spinal involvement was scored according to the modified Stoke AS Spine Score (mSASSS; range 0-72) and radiographic hip involvement according to the Bath AS Radiology Index (BASRI)-hip (range 0-4).

**Results:** Of the 167 included AS patients, 117 (70%) were male, mean age was 43 ± 11 years, 133 (80%) were HLA-B27 positive and median symptom duration was 16 years (range 1-53). 127 (76%) AS patients and 58 (58%) controls showed EL, with 501 lesions in total of which 377 (75%) in AS patients. AS patients showed significantly more lesions than controls at all 5 locations. The most prevalent type of lesion in both groups was erosion/cortical irregularity (72% vs 51%, p<0.005). Enthesophytes were also more often observed in AS patients than in controls (31% vs 21%, p=0.07). Prevalence of calcifications was low in both groups and not significantly different (5% vs 2%, p=0.22). AS patients with EL were significantly older (mean 45.2 vs 35.1 yrs, p<0.005) and had longer symptom duration (median 18 vs 7.5 yrs, p<0.005) than patients without EL. Furthermore, patients with BMI >25 had significantly more often enthesophytes (42% vs 16%, p<0.05) than patients with a normal BMI. Additionally, AS patients with EL had significantly more often radiographic spinal damage than patients without EL with median mSASSS total score 8.7 vs 1.0 (p<0.005) and a trend toward significance for radiographic hip involvement (BASRI-hip score ≥2, p=0.06).

**Conclusion:** Radiographic EL at the hip and pelvic region are significantly more prevalent in AS patients than in age and sex matched controls. AS patients with EL were significantly older, had longer symptom duration and more spinal radiographic damage than patients without EL. Furthermore, BMI >25 was associated with a higher prevalence of enthesophytes. These new findings contribute to the knowledge of entheseal involvement in AS.

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**REFERENCES:**