SPONDYLOARTHRITIDES (INCLUDING PSORIATIC ARTHRITIS)

207. ASSESSING BONE DENSITY IN PATIENTS WITH ANKYLOSING SPONDYLITIS USING DUAL ENERGY ABSORPTIOMETRY

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Background: AS is a chronic inflammatory condition associated with trabecular bone loss, osteoporosis and a high risk of fracture. However, assessment of vertebral bone mineral density using standard...
Results: Low BMD at: (i) hip, and (ii) spine, and increasing symptom duration was explored. Logistic regression was used to explore associations between the relationship between site of lowest BMD and symptom duration was expression) was 67.58% (33.42%)

Methods: Patients attending AS clinics who had undergone DEXA assessment of bone mineral density were identified and symptom duration at time of DEXA recorded. Prevalence of low BMD (defined as T-score <−1) and osteoporosis (defined as T-score <−2.5) was identified. The relationship between site of lowest BMD and symptom duration was explored. Logistic regression was used to explore associations between Low BMD at: (i) hip, and (ii) spine, and increasing symptom duration in 10 year categories, adjusting for age at time of scan.

Results: 111 patients with AS, mean age 50.3 (s.o. 12.9), and 76.6% male were identified. The mean symptom duration at DEXA was 21.6 years (s.o. 11.8) which was similar for both males and females. The spine was the site of lowest BMD for 32 (29.8%) with symptom duration <20 years (n = 51), and 17 (26.3%) with symptom duration ≥20 years (n = 60) (ch2 = 13.24, P < 0.005). Low BMD at the hip was observed in 55 (49.6%) of the cohort with 13 (11.7%) having BMD <−2.5. Low BMD at the spine was seen in 49 (44.1%) with 12 (10.8%) in osteoporotic range. Increasing disease duration was not significantly associated with low BMD at the hip and spine in the whole cohort. However, during the first 20 years of symptoms with AS, each additional 10 years of symptom duration was associated with osteopenia in the vertebra. This association remained after adjusting for age (OR adj 3.5 (95% 1.0, 12.0)). No such association was observed in those with longer symptom duration (>20 years) at time of DEXA (OR adj 0.7 (OR 0.2, 2.9)).

Conclusion: This small observational study in a cohort of predominantly younger male patients with AS has highlighted a high prevalence of low bone density and osteoporosis at both the hip and the spine. Those with shorter symptom durations tend to have lower bone density at the spine compared with the hip. After 20 years of AS symptoms, AP DEXA appears to be less reliable at assessing vertebral BMD. Use of lateral DEXA may be more appropriate for assessing BMD in those with syndesmophytes and longer disease durations.

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