

AB121. 210. A retrospective review of the prevalence of osteoporosis and sarcopenia amongst patient with pelvic and acetabular trauma

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Background: The aim of this study is to review patients over the age of 50 with pelvic and acetabular fractures to identify the prevalence of osteoporosis and sarcopenia. To conduct a feasibility study of using CT pelvis scans as a diagnostic tool to detect osteoporosis and sarcopenia on patients referred to the national centre for pelvic and acetabular trauma. To conduct a 5-year review on the patients and determine the aetiology of the underlying mechanisms of injury in this cohort. To correlate the mechanism (low energy *vs.* high energy) and identify if osteoporosis is a factor in the low energy injuries.

Methods: A proof of concept of the ability to diagnose osteoporosis and sarcopenia on patients with acetabular and pelvic fractures over the age of 50 will be conducted. A cohort will be chosen who have an existing dual energy X-ray

absorptiometry (DEXA) scan and a CT pelvis. The two assessors will be blinded as to the results of the DEXA scans. The DEXA scans will be interrogated to provide information on osteoporosis and lean appendicular body mass as a marker of sarcopenia. The inter and intra observer reliability will be assessed. The CT scans will be investigated to extrapolate Hounsfield units and lean body mass. This will be compared to the gold stand of DEXA scans to ascertain whether it is possible to make an accurate diagnosis in this cohort. The criteria used will be in line with international described units in the literature, 15 patients will be chosen to identify the presence or absence of osteoporosis and sarcopenia.

Results: Fifteen patients were identified with plain film radiographs, DEXA scans and CT pelvis scans. A consultant radiologist and an orthopaedic registrar were involved in the data analysis. Osteoporosis is a factor in the low energy falls which lead to pelvic and acetabular trauma.

Conclusions: CT is a reliable guide to use diagnose osteoporosis and sarcopenia. This will guide the treatment of patients who are suspected to have osteoporosis or sarcopenia.

Keywords: Osteoporosis; sarcopenia; acetabular; fragility fracture

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