**AB0912 CLINICAL UTILITY OF THE WARD TRIANGLE OF HIP BONE DENSITOMETRY: DATA FROM AN FLS UNIT**

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**Objectives:** To evaluate the clinical utility of Ward’s triangle (W) of bone densitometry (BMD) of the hip in a population of postmenopausal women referred to BMD from a FLS Unit coordinated by Rheumatology (FLS-REU).

**Methods:** Retrospective study, which includes, after informed consent, postmenopausal women referred by any department of specialized medicine or primary care medicine, of the health department, to the FLS-REU Unit of our center, during the period of February 2010 to October 2019. General patient data were collected (age, gender), and risk factors for OP. BMD of the lumbar spine (CL) and hip (femoral neck, total hip) and W was performed, except if there was lumbar surgery, severe scoliosis, or a bilateral hip prosthesis. The BMD outcome was distributed in normal (T score: $>-2.5$ SD) and OP (T score: $<-2.5$ SD), separated into two groups: mild OP (T score: $<-1.5$ SD to $-2.5$ SD) and OP (T score: $<-2.5$ SD) OP in 2,197 (39%) SD, of which 1,010 (61%) had W result available (Table 1). The result of the mean T-score (SD) was: in CL: $-1.49$ (1.48) SD, femoral neck: $-1.33$ (1.11) SD and in W: $-2.05$ (1.12) SD. In 947 (16%) patients with a W result available (Table 1). The result of the mean T-score (SD) was: in CL: $-1.49$ (1.48) SD, femoral neck: $-1.33$ (1.11) SD and in W: $-2.05$ (1.12) SD. In 947 (16%) women, the W was normal, with a mean T-score: $-0.28$ (1.12) SD; osteopenia in 2,606 (45%) T scores: $-1.83$ (1.12) SD and OP in 2,197 (39%) SD, of which 1,010 (61%) had mild-moderate OP and 967 (49%), severe OP.

The table shows the BMD results of W and CL, the correlation coefficient between them being 0.52 (0.50-0.5), P < 0.001, although with a Kappa coefficient of 0.26 (0.24-0.28, P = 0). The probability that a result in W of normal BMD is normal, with a mean T-score: $-0.28$ (1.12) SD; osteopenia in 2,606 (45%) T scores: $-1.83$ (1.12) SD and OP in 2,197 (39%) SD, of which 1,010 (61%) had mild-moderate OP and 967 (49%), severe OP.

**Results:** 5,740 postmenopausal women referred for BMD are included, with the Ward Osteoporosis was $<2.5$ SD and OP in 5,738 (16%) SD, of which 3,144 (51%) had W result available (Table 1). The result of the mean T-score (SD) was: in CL: $-1.49$ (1.48) SD, femoral neck: $-1.33$ (1.11) SD and in W: $-2.05$ (1.12) SD. In 947 (16%) T scores: $-1.83$ (1.12) SD and OP in 2,197 (39%) SD, of which 1,010 (61%) had mild-moderate OP and 967 (49%), severe OP.

**Discussion:** To establish predictors of fragility fracture in a cohort referred for BMD estimation, subsequently found to have bilateral FN BMD of greater than 1.

**Methods:** A cohort of patients in the North West of England referred between 2004 and 2014 for BMD estimation, with both left and right FN BMD of greater than 1 were identified. The patient data identified and analysed included age at scan, gender, BMI at left hip, body mass index (BMI), fat mass, family history of fracture, alcohol history of 3 or more units per day, smoking status, rheumatoid arthritis (RA), and steroid exposure. Patients with fragility fracture were compared with those without fracture. Chi-square test and T-test were applied to categorical and continuous data respectively. Further univariate and multivariate logistic regression models were fitted to determine parameters associated with future fracture risk.

**Results:** 619 patients with mean FN BMD of greater than 1 were identified. Mean age at scan was 54 years (SD 11.82) and 542 (87.56%) were female. 92 (14.86%) patients had a fragility fracture. Mean left FN BMD was 1.91 (SD 0.71), and mean right FN BMD was 1.92 (SD 0.68). Results of the univariate analysis are described in Table 1 below.

**Conclusion:** Steroid exposure and body composition parameters influence fracture risk in this group of patients with normal BMD, further work will be done looking at the types of fractures and other parameters in this group of patients.