is the identification of in-hospital complication (pneumonia), which should be actively monitored in these patients.

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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 index [Ts] to -1 SD), osteopenia (Ts: -1.1 to -2.5 SD) and OP (Ts: <-2.5 SD), separated into two groups: mild OP-moderate (Ts: from <-2.5 DE to -3 DE) or severe OP (Ts: <-3 DE).

Results: 5,740 postmenopausal women referred for BMD are included, with the W result available (Table 1). The result of the mean Ts (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 Ts: -0.28 (1.12) SD; osteopenia in 2,606 (45%): -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 (0.5-0. 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 also in CL is 73% (70% -76%), in osteopenia in both: 47% (45% -49%) and OP: 46% (44 % -48%). In the analysis by ROC curve, the cut-off point of Ts in W for osteopenia in CL is -1.85 SD (sensitivity: 0.648, specificity: 0.649, with AUC: 0.0702. [0.687-0.716]) and for OP in CL -2.35 DE (sensitivity: 0.69, specificity: 0.70, with AUC: 0.757 [0.744-0.770]).

LUMBAR SPINE (LS)				
	Normal	Osteopenia (OP)	OP <-2.5 a -3 SD	OP <-3.0 SD
Ward normal	681	211	39	26
N (%): 947 (16)	0.41±1.78	-1.61±1.78	-2.95±1.78	-2.7±1.78
Tscore: -0.28 ± 1.12 SD				-3.46±1.78
Ward osteopenia	899	1,192	463	310
N (%): 2,606 (45)	-0.07±1.48	-1.73±1.48	-2.96±1.48	-2.72±1.48
Tscore: -1.83±1.12 SD				-3.43±1.48
Ward Osteoporosis	346	800	975	-
N (%): 2,187 (39)	-0.19±1.48	-1.83±1.48	-3.23±1.48	
Tscore: -3.07±1.13 SD				
Ward Osteoporosis <-2.5 a -3 SD	188	416	-	173
N: 1,010 (51)	-0.16±1.48	-1.83±1.48		-2.77±1.48
Tscore: -2.78±1.12 SD				-3.08±1.48
Ward Osteoporosis <-3 SD	114	304	-	193
N: 967 (49)	-0.24±1.48	-1.84±1.48		-2.78±1.48
Tscore: -3.51±1.13 SD				-3.73±1.48

Conclusion: 1.For clinical practice, the usefulness of the W result is low, although if the BMD result is normal, there is a 73% probability that in CL it will also be. 2. The correlation between the result of W and CL, although significant, is slight. 3. The cut-off points of Ts, with better sensitivity and specificity, that correlate a W osteopenia or osteoporosis with the result in CL is -1.85 and -2.35 SD, respectively.

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AB0913

PREDICTING PATIENTS AT RISK OF FRAGILITY FRACTURE WITH NORMAL BONE MINERAL DENSITY: AN OBSERVATIONAL STUDY

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Background: There is an increased risk of low-trauma fracture as bone mineral density (BMD) decreases, however a large proportion of these fragility fractures occur in those without osteoporosis or osteopenia. The widely used FRAX tool uses femoral neck (FN) BMD, amongst other parameters, to predict fracture risk. In those with normal BMD, data is lacking on the weight these other parameters hold in predicting future risk. Indeed, FN BMD can be facultative in the estimation of risk when using FRAX.

Objectives: To establish predictors of fragility fracture in a patient 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. Patient parameters identified and analysed included age at scan, gender, BMD 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 bilateral FN BMD of greater than 1 were identified and included in analysis. 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.

Table 1. Logistic regression analysis of patient parameters with unadjusted and adjusted odds ratios for fragility fracture

Predictor	Unadjusted odds ratio (95% CI)	Odds ratio adjusted for age (95% CI)	Odds ratio adjusted for age and gender (95% CI)
Age at scan (years)	0.99 (0.98-1.01)	-	-
Gender	1.37 (0.66, 2.84)	1.34 (0.64, 2.80)	-
BMD at left hip	0.34 (0.03, 4.05)	0.37 (0.03, 4.37)	0.50 (0.03, 7.67)
BMI	1.07 (1.03, 1.10)	1.07 (1.03, 1.10)	1.07 (1.03, 1.10)
Fat mass	1.00 (1.00, 1.00)	1.00 (1.00, 1.01)	1.00 (1.00, 1.01)
Parent fractured hip	0.99 (0.57, 1.70)	0.97 (0.56, 1.68)	0.94 (0.54, 1.64)
Alcohol (3 or more units/day)	1.16 (0.47, 2.86)	1.16 (0.47, 2.87)	1.16 (0.47, 2.89)
Current smoker	1.40 (0.89, 2.21)	1.40 (0.89, 2.21)	1.42 (0.90, 2.23)
Rheumatoid arthritis	0.83 (0.32, 2.19)	0.85 (0.32, 2.24)	0.86 (0.34, 2.27)
Steroid exposure	0.53 (0.30, 0.96)	0.53 (0.30, 0.96)	0.54 (0.30, 0.98)

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.

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AB0914

BONE LOSS AND NEW FRACTURES WITH DENOSUMAB TREATMENT

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