Conclusions: In summary, this study demonstrated a significantly increased risk of incident hip fracture among patients with PAD compared with individuals without PAD.

Disclosure of Interest: None declared

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OP0064

GENERAL BONE LOSS IN PATIENTS WITH EROSIVE AND NON-EROSIVE HAND OSTEOARTHRITIS DURING THREE YEARS

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Background: Hand osteoarthritis (OA) and its more severe subset erosive hand OA are common causes of pain and morbidity. Some metabolic factors were suggested to be implicated in erosive disease. Few studies investigated differences in systemic bone loss between erosive and non-erosive hand OA.

Objectives: To compare the change of bone mineral density (BMD) between patients with erosive and non-erosive hand OA in a longitudinal study after three years.

Methods: American College of Rheumatology (ACR) criteria were used to assess hand OA. Erosive hand OA was defined by at least one erosive interphalangeal joint. All patients underwent clinical assessments of joint swelling and radiographs of both hands. DEXA examination of lumbar spine, total femur and femur neck was performed at baseline and after three years. Metabolic risk factors (body mass index, hypertension, diabetes, dyslipidaemia) were collected.

Results: Altogether, 144 patients (15 male) with symptomatic nodal HOA were included in this study and followed between April 2012 and January 2018. Out of these patients, 82 had erosive disease after three years. The disease duration ($p < 0.01$) was significantly higher in patients with erosive compared with non-erosive disease.

Most patients took symptomatic slow acting drugs (SYSADOA) twice a year, non-steroidal anti-inflammatory drugs (NSAIDs) and analgesics on demand.

Baseline population characteristics did not differ between both groups. Osteoporosis (T-score < -2.5 SD) was diagnosed in 12.5% (9/72) of patients with erosive hand OA and in 8.06% (5/57) of patients with non-erosive hand OA. Although BMD did not significantly differ between the groups (BMD of lumbar spine 1.05 g/cm² vs 1.13 g/cm², $p < 0.05$, total femur 0.90 g/cm² vs 0.97 g/cm², $p < 0.01$ and femur neck 0.86 g/cm² vs 0.91, $p < 0.05$), T-scores of lumbar spine (-0.96 vs -0.41 SD, $p < 0.05$), total femur (-0.69 vs -0.33 SD, $p < 0.05$) and femur neck (-1.14 vs -0.88 SD, $p < 0.05$) were significantly lower in patients with erosive compared with non-erosive disease.

After three years, the decrease in T-score of lumbar spine was significantly higher in erosive hand OA compared to non-erosive disease (-3.66% vs 15.52% , $p < 0.01$), also the decrease of T-score in total femur was significantly higher in erosive hand OA compared to non-erosive disease (-4.29% vs 7.68% , $p < 0.05$).

The decrease of bone mineral density was also significantly higher in patients with erosive hand OA after three years. The decrease of BMD of lumbar spine was significantly higher in erosive hand OA after three years compared to non-erosive disease (-3.30% vs 1.06% , $p < 0.05$), the decrease of BMD in femur neck was significantly higher in erosive hand OA after three years compared to non-erosive disease (-3.2% vs 0.02% , $p < 0.05$), the decrease of BMD total femur neck was significantly higher in erosive hand OA after three years compared to non-erosive disease (-1.58% vs 0.82% , $p < 0.05$).

Conclusions: These results suggest that patients with erosive hand OA are at higher risk for development of deep general bone loss.

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OP0065

OSTEOPOROSIS AND VERTEBRAL FRACTURES ARE ASSOCIATED WITH DISEASE ACTIVITY AND RADIOGRAPHIC DAMAGE IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS

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Background: Osteoporosis (OP) and vertebral fractures (VF) are common comorbidities of axial Spondyloarthritis (axSpA) with deleterious effects for the physical function of the patients.

Objectives: To evaluate the relationship between disease activity and radiographic damage and bone mineral density (BMD), 25 (OH) vitamin D levels and VF in patients with axSpA (ASAS Criteria).

Methods: Cross-sectional study. Activity variables: Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) and Ankylosing Spondylitis Disease Activity Score (ASDAS); ESR and CRP. Vitamin D insufficiency if < 30 ng/mL. Lumbar Spine (LS) and femoral neck (FN) Dual X-ray absorptiometry (DXA) performed. Evaluation of VF with semiquantitative method (Genant) in thoracolumbar X-rays. Bivariate analysis to evaluate the associations with the presence of OP and/or VF, then binary and multiple logistic regression models, by using SPSS (v23); p values < 0.05 considered significant.

Results: We studied 206 patients (62 women/144 men); 86% AS/14% nr-axSpA and associated peripheral involvement in 42%. Mean $\pm$ standard deviation (SD) values: age 52 ± 14 ; activity (BASDAI 3.6 ± 2.2 , ASDAS-CRP 2.2 ± 0.95 , ASDAS-ESR 2.5 ± 0.99 , CRP 4.97 ± 8.97 mg/L, ESR 18.2 ± 14 , 8 mm); physical function (BASFI 3.3 ± 2.7); radiographic damage: mSASSS total 20.46 ± 19.14 , lumbar 10.41 ± 9.89 and cervical 10.05 ± 10.78 ; 25 (OH) vitD 19.83 ± 9.25 ng/mL, 85.7% of the patients had insufficiency. Low LS BMD in 25.7% (z-score) and 28.9% (t-score) and low FN BMD in 45.2% (z) and 28.9% (t) of the patients. OP prevalence in LS 3.2% (z)/6.9% (t) and in FN 9.1% (z)/13.4% (t). Morphometric VF were identified in 34% of the patients.

Bivariate analysis: ESR, ASDAS-ESR, age, male sex, low 25 (OH) vitD levels and the mSASSS were associated with low FN BMD. Multivariate models confirmed the association between disease activity (ASDAS-ESR) [OR 3.32 (95% CI: 2.35 to 4.55); $p = 0.016$], 25(OH)D [OR 0.95 (95% CI: 0.86 to 0.98); $p = 0.029$] and low FN BMD (z score).

An association was confirmed between CRP [OR 2.34 (95% CI: 1.10 to 4.98); $p = 0.027$], radiographic damage [lumbar mSASSS OR 1.06 (95% CI: 1.03 to 1.10) $p = 0.001$, high LS BMD [OR 296 (95% CI: 5.07 to 12258); $p = 0.006$] and low FN BMD [OR 0.11 (95% CI: 0.03 to 0.12); $p = 0.000$] and the presence of VF.

Abstract OP0065 – Table 1. Differences between patients without or with VF

	Without VF	With VF	p value
CRP (mg/L)	5.10 $\pm$ 1.6	9.51 $\pm$ 2.1	$p = 0.003$
ESR (mm/h)	15.87 $\pm$ 4.8	23.12 $\pm$ 6.2	$p = 0.002$
25OHvitD (ng/mL)	20.80 $\pm$ 4.6	18.04 $\pm$ 3.7	$p = 0.049$
cervical mSASSS	8.02 $\pm$ 2.5	13.11 $\pm$ 4.8	$p = 0.002$
lumbar mSASSS	8.93 $\pm$ 3.7	12.36 $\pm$ 6.5	$p = 0.000$
total mSASSS	17.66 $\pm$ 7.3	27.13 $\pm$ 10.7	$p = 0.000$
LS BMD	1.090	1.191	$p = 0.002$
	± 0.09	± 0.13	
FN BMD	0.912	0.773	$p = 0.000$
	± 0.11	± 0.18	

Conclusions: In patients with axSpA, low FN BMD is associated with disease activity and vitamin D insufficiency and VF are associated with CRP and low hip bone mass. Furthermore, the presence of radiographic damage, even when 'falsely' increases LS BMD, is associated with the presence of fractures.

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