OP0052 CORTICAL BONE LOSS IS AN EARLY FEATURE OF AXIAL SPONDYLOARTHRITIS

J. Haschka[1,2], A. Neumann[1], A. Kleyer[1], L. Schuster[1], M. Englbrecht[1], C.P. Figueiredo[1,3], C. Muschitz[2], R. Kocijan[2], H. Resch[2], J. Rech[1], G. Schett[1]. *[1]Department of Internal Medicine 3, University of Erlangen-Nuremberg, Erlangen, Germany; [2]Department of Internal Medicine II, St. Vincent Hospital, VINFORCE Study Group, Vienna, Austria; [3]Division of Rheumatology, Faculdade de Medicina da Universidade de São Paulo, São Paulo, Brazil*

Background: Systemic bone loss is a well-known and severe consequence in axial spondyloarthritis (axSpA). To date deterioration of bone microstructure has only been described in patients with long-standing ankylosing spondylitis while bone microstructure has not been assessed in axSpA.
Objectives: The aim of the present study was to investigate bone microstructure, geometry and volumetric bone mineral density (vBMD) using high resolution peripheral quantitative CT (HR-pQCT) in a cohort of axSpA patients at an early stage of disease and to search for potential factors for deterioration of bone microstructure.
Methods: An inception cohort of 101 axSpA patients and 50 healthy controls of similar age and sex was assessed for geometric, volumetric and microstructural parameters of bone using HR-pQCT scanning of the radius. Additionally, demographic and disease specific characteristics of SpA patients were recorded.
Results: SpA patients and controls were comparable in age (median (IQR) 45.0 (15.0) vs. 44.76 (26.0) years, p=0.917), sex (female 41.6% vs. 40%, p=0.852) and BMI (median (IQR) 26.3 (6.5) vs. 23.8 (5.2), p=0.118). 75% of patients showed HLA-B27 positivity. Median disease duration was 6.5 (9.0) years, 58.4% of patients were on biological treatment and 14.9% of patients in disease remission according to ASDAS-CRP. Geometric and microstructural analysis by HR-pQCT revealed a significantly reduced cortical area (p=0.022) and cortical thickness (p=0.006) in SpA patients compared to controls. No differences in cortical porosity (p=0.685), trabecular geometry or microstructure were detected. Total and cortical vBMD were significantly reduced in SpA patients (p=0.042 and p=0.007), while there was no difference in trabecular vBMD (p=0.376). Patients with a short disease duration <2 years (n=46) showed a significant reduction of cortical thickness and cortical area (p=0.050 and p=0.032) compared to controls. Patients with a disease duration >2 years (n=55) additionally developed a decrease of cortical and total vBMD (p=0.004 and p=0.036). Multivariate regression models identified male sex to be associated with lower cortical vBMD and female sex with lower trabecular vBMD. History of prednisolone treatment (>5mg >3months) was associated with lower trabecular vBMD, and disease duration with higher trabecular vBMD. Remission status, treatment with TNF inhibitors, HLA-B27 status and presence of peripheral arthritis did not influence bone microstructure independently.
Conclusions: Bone microstructure in SpA patients is primarily characterized by deterioration of cortical bone. Cortical bone loss starts early and is evident within the first 2 years of disease.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.3888

OP0053 BONE LOSS AND CARDIOVASCULAR RISK IN PATIENTS WITH EROSIVE AND NON-EROSIVE HAND OSTEOARTHRITIS

O. Ruzickova, O. Sleglova, K. Pavelka, L. Senolt. *Revmatology, Institute of revmatology, Prague 2, Czech Republic*

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. Furthermore, few studies investigated differences in systemic bone loss and cardiovascular risk factors between erosive and non-erosive hand OA.
Objectives: To compare bone mineral density (BMD) and major cardiovascular risk factors between patients with erosive and non-erosive hand OA in a cross-sectional study.
Methods: Patients with symptomatic disease fulfilling the American College of Rheumatology (ACR) criteria for hand OA were included in this study. 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. Metabolic risk factors (body mass index, hypertension, diabetes, dyslipidaemia) were collected. Patients were examined at baseline, one-year and two years follow-up.
Results: Altogether, 129 patients (12 male) with symptomatic nodal hand OA were included in this study and followed between April 2012 and January 2017. Out of these patients, 72 had erosive disease. The disease duration (p<0.01) was significantly higher in patients with erosive compared with non-erosive disease at baseline. Patients were taking 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 bone mineral density did not significantly differ between the groups, T-scores of lumbar spine (-0.46 vs. -1.04 SD, p<0.001), total femur (-0.36 vs. -1.20 SD, p<0.001) and femur neck (-0.92 vs. -1.20 SD, p<0.01) were significantly lower in patients with erosive compared with non-erosive disease. After two years, the decrease in T- score of lumbar spine was significantly higher in patients with erosive compared with non-erosive hand OA (-0.08 SD vs. 0.07SD, p<0.01; total difference between groups is 10.92%). The decrease of T-score in femur neck, total femur and the decrease of BMD (g/cm^2) in all regions were also higher, although not significantly, in patients with erosive compared with non-erosive hand OA. In addition, more patients with erosive compared with non-erosive hand OA were treated for dyslipidaemia at baseline and after two years (32% vs. 28% and 32% vs.30%, p<0.01 for both comparisons).
Conclusions: These results suggest that patients with erosive hand OA are at risk for development of general bone loss and cardiovascular diseases.
Acknowledgements: This work was supported by the project MHCR No. 023728.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.6064

OP0054 INCIDENCE OF VERTEBRAL FRACTURES IN EARLY SPONDYLOARTHRITIS: 5-YEAR PROSPECTIVE DATA OF THE DESIR COHORT

J. Sahuguet[1], J. Fechtenbaum[1], A. Molto[1], A. Etcheto[1], P. Richette[2], M. Dougados[1], C. Roux[1], K. Briot[1]. *[1]Rheumatology department, Hôpital Cochin; [2]Rheumatology department, Hôpital Lariboisière, Paris, France*

Background: Osteoporosis is a well-recognized feature of axial spondyloartyhritis (ax-SpA) and an increased risk of vertebral fractures (VFs) has been reported in patients with SpA. The prevalence of VFs is highly variable across studies, up to 30%. These data are unexpected in a disease affecting a young population, predominantly males. These results could be related to differences in methods of diagnoses of VFs and in populations with highly variable duration of the disease. We hypothesized that the prevalence and incidence of VFs be lower than the ones previously reported, especially in early spondyloarthritis.
Objectives: Our primary aim was to assess the prevalence of VFs in a cohort of early inflammatory back pain suggestive of early axial SpA and their incidence over 5 years.
Methods: Study population: patients from the DESIR (DEvenir des Spondylarthropathies Indifférenciées Récentes) cohort, which is a french national longitudinal prospective cohort including adults between 18 and 50 years old, and presenting with inflammatory back pain suggestive of axSpA for less than 3 years. Follow-up is still ongoing, but the data presented here includes the first 5 years of follow-up. All patients had thoracic and lumbar spine X-rays at baseline, 2 years and 5 years. For this particular study, all radiographs of the DESIR cohort were centrally read by one reader, an expert in the field of the diagnosis of VFs according to Genant's method. Careful assessment was used to distinguish true VFs not to be mistaken with deformities. Using a temporal sequence of reading (i.e. unblinded for chronological order), an incident VF was defined as a change in the score of a vertebra from grade 0 to a subsequent grade 1 or more. All vertebrae between T4 and L4 were evaluated. In doubtful cases, an adjudication by two other senior experts was performed. Prevalence at inclusion and the incidence of VFs over the first 5 years of follow-up were described.
Results: A total of 708 patients with inflammatory back pain were included in the DESIR cohort. Plain dorsolumbar spine X-rays were available for 694 patients, and thoracic and/or lumbar X-rays were available for 643 patients at baseline. Twenty eight VFs were identified in 21 patients (19 grade 1 VFs and 9 Grade 2 or 3 VFs); therefore, the prevalence of VFs was 4.5%.
Complete X-ray follow up between baseline and M60 was available for 433 patients. Seven incident VFs were identified in 6 patients: at 2 years 3 grade 1 VFs and 1 grade 2 VF were identified; and at 5 years, 2 grade 1 VF and 1 grade 2 or more VF were identified. The 5-year incidence of VFs was 1.6%.
Conclusions: In this study focused on a population of early spondyloarthritis, the reported low prevalence of VFs of 4.5% and incidence of 1.6% confirm our hypothesis that the real prevalence and incidence of VF in SpA is probably much lower than what was reported in previous studies. These discrepancies might be explained by the variability in the methods of vertebral fracture's assessment as vertebral deformations might be inappropriately considered as fracture.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.6324

WEDNESDAY, 14 JUNE 2017

Rehabilitation and modern drug treatment - needs and challenges

OP0055-HPR PREFERENCES FOR SELF-MANAGEMENT AND SUPPORT SERVICES IN PATIENTS WITH INFLAMMATORY ARTHRITIS: A DANISH NATIONWIDE CROSS-SECTIONAL STUDY

N.M. Hammer[1], C. Flurey[2], K.V. Jensen[1], L. Andersen[1], B.A. Esbensen[1,3]. *[1]Rigshospitalet - Glostrup, COPECARE, Centre for Rheumatology and Spine Diseases & Research Unit, Glostrup, Denmark; [2]Rheumatology Unit, Bristol Royal Infirmary, Bristol, West England, United Kingdom; [3]Department of Clinical Medicine, Faculty of Health and Medical, University of Copenhagen, Copenhagen, Denmark*

Background: During recent years the medical treatment of inflammatory arthritis