

WORLD CONGRESS  
ON OSTEOPOROSIS,  
OSTEOARTHRITIS AND  
MUSCULOSKELETAL  
DISEASES

# VIRTUAL CONGRESS

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AbstractBook

**Method:** A multidisciplinary expert group of rheumatology, health economics and psychology professionals designed a multifaceted questionnaire to understand the burden of illness for 5 types of arthritis, fibromyalgia syndrome and osteoporosis. 2000 patients with a diagnosis of ankylosing spondylitis, fibromyalgia syndrome, gout, osteoarthritis, osteoporosis, psoriatic arthritis or rheumatoid arthritis were invited to complete a detailed 16-page questionnaire, following IRB approval and informed consent. Prevalence estimates for the Republic of Ireland (RoI) for each illness were estimated using 2016 USA and UK reports and national RoI 2016 census population statistics.

**Results:** 652 completed questionnaires were returned and available for analysis. All diagnoses were associated with significant pain, disability, depression, limited activity and healthcare costs. A significant proportion of respondents reported at least 1 or more comorbidities. A strong association was noted between the number of comorbidities and disability, pain, reduced quality of life and healthcare costs.

Table. Age, gender, Health Assessment Questionnaire (HAQ), pain, depression and activity impairment of patients with 1, 2 or 3 or more musculoskeletal disorders.

Number of MSK	Number	Age (SD)	Gender (%)	HAQ	Pain	Depression $\geq 50\%$ of time	Limited Activity
Single Diagnosis	394	56.9 (14.3)	220 (55.8)	0.7 (0.7)	2.7 (1.1)	35.8%	55.6%
2 Diagnoses	178	58.7 (13.7)	109 (61.2)	1.1 (0.7)	3.1 (1.0)	46.6%	68.0%
3 or more Diagnoses	65	60.0 (14.3)	44 (67.7)	1.3 (0.8)	3.5 (1.1)	52.3%	66.2%

**Conclusion:** Multimorbidity is common in musculoskeletal diseases and strongly linked to disability and reduced quality of life. This warrants further consideration in epidemiologic studies and patient management strategies.

## P637

### FRACTURE RISK ASSOCIATED WITH COMORBIDITIES AND MEDICATION USE IN PATIENTS SCREENED IN A FRACTURE LIAISON SERVICE

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**Objective:** Assess the risk of fracture associated with comorbidities and with chronic medication. Associate comorbidities and chronic medication as bone-related risk factors and risk factors related to falls. Determine the prevalence of risk factors related to bone and related to fall, in this population.

**Methods:** Observational, cross-sectional and retrospective study of consecutive patients followed at a fracture liaison service of a tertiary hospital between 1 January 2017 and 31 August 2020 with both comorbidities and chronic medication systematically assessed. Comorbidities were classified according to the International Statistical Classification of Diseases and Related Health Problems - 10 and chronic medication according to the Anatomic Therapeutic Chemical classification and were categorized as associated with decreased bone mass or risk of falling. Number of previous fractures and BMD were correlated with the number of risk factors analysed.

**Results:** Of the 189 patients referred to the fracture liaison service, 154 patients were included. 89% were female, with an average age of  $77.4 \pm 10.0$  y with 81.8% with  $\geq 70$  y. 91.6% have at least one bone risk factor, 92.2% at least one fall risk factor and only one patient without any risk factor (0.6%). 87% had at least one fall-related comorbidity and 77% were medicated with at least one fall-enhancing drug.  $6.13 \pm 3.4$  risk factors were identified in average. Patients with  $\geq 2$  fractures have more fall-related comorbidities (p-value=0.029).

**Conclusion:** Multiple risk factors were identified, with heterogeneous overlaps and a multitude of combinations. This points to the need for an integrated assessment of all risk factors related to falls, in addition to bone risk factors assessment in a fracture liaison service. It also reinforces the importance of including systematic assessment of fall risk in this population, and the subsequent implementation of fall prevention strategies.

## P638

### XANTHINE OXIDOREDUCTASE ACTIVITY IN BLOOD DEPENDING ON THE FUNCTIONAL CLASS OF RHEUMATOID ARTHRITIS PATIENTS

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**Objective:** The full life of RA patients depends on the preservation of their functional capabilities. The preservation of the patient ability to carry out professional, nonprofessional activities, self-service are estimated by the functional class. Obviously, it is associated with the severity of the clinical picture: RA activity, the presence of extra-articular manifestations, the severity of bone resorption. Xanthine oxidoreductase (XOR), which has pro-oxidant activity, can aggravate these processes. This study aimed to evaluate the changes of XOR interconvertible forms (xanthine

oxidase (XO), EC 1.17.3.2 and xanthine dehydrogenase (XDH), EC 1.17.1.4 activities in plasma and lysed red blood cells (RBCs) depending on the functional class of RA patients.

**Methods:** Diagnosis of RA was verified using the ACR/EULAR criteria (2010). XO and XDH activities were measured in plasma and lysed RBCs by spectrophotometric method [1]. The results were expressed as Me ( $Q_{25}$ ;  $Q_{75}$ ). Spearman's correlation coefficient was used. Differences were considered significant when  $p < 0.05$ .

**Results:** 77 patients (57 females, 20 males) were enrolled in the study. Mean age of patients was 45 (37; 49) y, mean RA duration was 8 (6; 10) y. 16 (20.8%) patients had low disease activity (DAS 28), moderate and high disease activities were determined in 49 (63.6%) and 12 (15.6%) cases, respectively. Extra-articular manifestations were revealed in 32 (41.6%) patients. Most RA patients had II and III radiological stages (by Steinbrocker criteria): 39 (50.6%) and 24 (31.2%), respectively. 30 (39%) patients were related to the second functional class, 40 (51.9%) to the third functional class, 7 (9.1%) to the fourth functional class. The XO and XDH activities of lysed RBCs as well as the XO activity of plasma were correlated with the functional class of RA patients ( $p < 0.001$ ). High functional classes of RA were characterized by more high XO activities in plasma and RBCs as well as lower XDH activities in RBCs.

**Conclusion:** Our results indicate that the deterioration in the functional capabilities of RA patients are accompanied by an increase activity of XO (oxidase form of XOR), which produces reactive oxygen species that have a damaging effect on body tissues.

**Reference:** 1. Zborovskaya IA, et al. Russian J Pain 2018;3:47

## P639

### SCLERODERMA SYSTEMIC: CLINICAL AND IMMUNOLOGICAL PROFILE OF 22 CASES

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**Objective:** Systemic sclerosis is an autoimmune connective tissue disease, arterioles and microvessels. It is characterized by fibrosis and vascular obstruction may affect in particular the skin, gastrointestinal tract, lung and kidney. The purpose of our work is to clarify the clinical and immunological profile of 22 patients with systemic sclerosis (SS).

**Methods:** This is a retrospective study spanning from January 2009 to April 2019 on 22 cases (SS) hospitalized at University Hospital Rheumatology Dept. of Tizi-ouzou.

**Results:** These 03 men and 19 women whose average age was 49 y [25-81 y], the duration of progression of the disease is 6 y on average. The skin involvement was present in 19 sclerosus atrophy type patients in 17 cases (89%) with melanodermic appearance in 3 cases and presence of telangiectasia in 4 cases. It was a limit-

ed form in 16 cases, 1 case SC diffuse scleroderma sine 5 cases. Raynaud's phenomenon was present in 20 cases (91%) with pulp ulcers in 7 cases. 1 case of subcutaneous calcinosis was noted. The articular manifestations are noted in 17 patients (77%), they are the type of arthritis in 10 cases (59%), monoarthritis law 1 case knee, left hip 1 case, and inflammatory polyarthralgia in 10 cases (59%). Pulmonary involvement was found in 8 cases (36%) type interstitial lung disease in 7 cases and 1 case of precapillary PAH. The digestive involvement was noted in 6 patients (27%) dominated by esophageal involvement in all cases. Cardiac involvement was noted in 4 patients (18%) type of pericarditis in 3 cases, and 1 case of congestive heart failure. Renal involvement in turn was noted in 4 patients with type of transient proteinuria averaging 0.24g/24. Bone densitometry was performed in 09 patients showed osteoporosis in 6 cases. An immunological assessment was performed in 17 patients found positive FAN in 16 of them [anti-Scl-70 (50%), anticentromere (23%)]. 14 patients have inflammatory syndrome knowing that 2 patients had lupus partner, 2 other inflammatory myopathy, 2 other rheumatoid arthritis, 2 other Sjögren's syndrome and one patient with primary biliary cholangitis. The evolution was marked by the occurrence of joint deformities in 5 cases, acro-osteolysis in one case and a cardiac decompensation in a case.

**Conclusion:** Our series confirms the predominance of female (SS) in its limited cutaneous form. It is characterized by its association with antitopoisomerase type I (anti-Scl-70) which are usually very specific diffuse cutaneous forms with a high frequency of joint damage (77%) source of functional and aesthetic damage.

## P640

### EFFECTIVENESS OF COGNITIVE BEHAVIOURAL THERAPY ON PAIN AND FUNCTION FOLLOWING TOTAL KNEE REPLACEMENT IN ADULTS WITH OSTEOARTHRITIS: SYSTEMATIC REVIEW AND META-ANALYSIS

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**Objective:** Total knee replacement (TKR) is a largely successful procedure, and 66% of patients who have undergone it report that "it feels normal". However, around 20% of patients experience chronic pain postoperatively without a clear reason, such as instability. Preoperative depression, pain elsewhere, and negative thoughts are related to poor outcomes following TKR. Cognitive-behavioural therapy (CBT) is short-term psychotherapy consisting of between 5-20 sessions used to improve outcomes for