WORLD CONGRESS
ON OSTEOPOROSIS,
OSTEOARTHRITIS AND
MUSCULOSKELETAL
DISEASES

# VIRTUAL CONGRESS

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AbstractBook

pharmacological therapy. However, regarding primary Sjögren's syndrome (pSS), available data are heterogeneous and proceed from small case series. For this reason, the aim of this study was to provide further information on the identification of atherosclerosis in pSS and its possible association with clinical and analytical parameters of the disease. We aimed to assess presence of subclinical atherosclerosis by means of carotid ultrasound in patients with pSS and to analyze clinical, analytical and CVRF along with their potential association with the presence of subclinical cardiovascular affectation.

*Methods:* This is a cross-sectional study of 38 patients with pSS and 38 age and sex matched controls. Demographic variables, disease characteristics and CVRFs were collected, and the presence of subclinical atherosclerosis was assessed by carotid ultrasound with carotid intima-media thickness (CIMT) measurement and determination of the presence of atheromatous plaques. Statistical analysis: To evaluate differences between patients and controls T-test or Wilcoxon test with continuity correction were used for quantitative features and Fisher test for categorical variables. In order to test the presence of pSS as an independent risk factor for subclinical atherosclerosis, from other features as classic CVRFs or analytical data, first we adjusted logistic binomial regression in a bivariate analysis, to select possible predictors to be included in a multivariate analysis. Statistical significance was $p<0.05$, and OR CI 95% vas calculated.

*Results:* Subclinical atherosclerosis presence was higher in patients with pSS than in controls [OR=4.17, 95%CI (1.27-16.54), $p<0.001$], as well as CIMT values (0.79±0.43 mm vs. 0.66±0.27 mm; $p=0.02$). As for classic CVRFs, no differences were found between both groups. An association of subclinical atherosclerosis with erythrocyte sedimentation rate (ESR) and rheumatoid factor (RF) was observed in patients with pSS.

*Conclusion:* This cohort showed a greater prevalence of subclinical atherosclerosis in patients with pSS, indicating this disease as an independent risk factor for presence of early vascular damage.

## P1143

## REAL-LIFE APPROACH TO THE MANAGEMENT OF BONE PATHOLOGY IN THE ITALIAN CITBL (CANCER TREATMENT INDUCED BONE LOSS) POPULATION: PRELIMINARY DATA OF THE HEQUOBIP STUDY

P. Villa[1], S. Giuliano[1], S. Magno[1], C. Cassani[2], S. Luisi[3], A. M. Becorpi[4], M. Pinto[5], R. Masetti[1], R. Nappi[2], G. Scambia[1]

[1]Fondazione Policlinico Universitario A. Gemelli IRCCS, Rome, [2]Università degli Studi di Pavia, Pavia, [3]Università degli Studi di Siena, Siena, [4]Azienda Ospedaliero-Universitaria Careggi Firenze, Firenze, [5]Istituto Nazionale dei Tumori di Napoli Fondazione G.Pascale, Napoli, Italy

**Objective:** The Hequobip Study (health and quality of life in oncological patients: management of bone pathology in the Italian population) is an ongoing National Survey and multicentric Observational Study that analyses the clinical approaches to bone diseases in breast cancer patients. The aim of the study is to provide an overview of the population characteristics and of the current clinical management of bone pathology in breast cancer patients.

**Methods:** Initial analysis of data is collected from one center of the study. 61 patients with breast cancer, in natural and stable menopause or having secondary amenorrhea, that arose after the initiation of oncologic treatment were included. We evaluate age, BMI, age at the breast cancer surgery, the timing of DXA examination in relationship to the oncological diagnosis, the DXA screening, the physician prescriptions and the appropriateness of bone management.

**Results:** The mean age and the BMI of patients at recruitment was 52.3±9.2 and 23.1±4 respectively. The mean age at surgery was 50.3±9.3. 74% of patients were prescribed aromatase inhibitors (current or previous treatment). We found that 70% of patients performed a DXA evaluation: 29.5% within 6 months of the surgery and 41% after 6 months. The mean T-score for spine DXA examination was -1.5±0.9 while the total femur T-score was -1.1±0.9. 86% of patients received a treatment for bone diseases: 80% received only vitamin D supplementation and 19.3% antiosteoporotic therapy. Three patients received oral BPs and 11 patients were prescribed denosumab. The main indication followed by clinicians to prescribe therapy was the presence of a T score <-2.5. Very few patients in AI treatment were screened for osteoporosis risk factors, or were prescribed with bone therapy independently from the T-score of the bone screening.

**Conclusion:** Clinicians adhered to the bone screening best practice method but despite extensive scientific literature and supporting international guidelines frequently failed to follow the specific indications on the treatment of bone health.

## P1144

## THE EXPRESSION OF CALCIFICATION OF HEART VALVES IN PATIENTS WITH RHEUMATOID ARTHRITIS AND OSTEOARTHRITIS ACCORDING TO ECHOCARDIOGRAPHY

A. V. Aleksandrov[1], N. V. Aleksandrova[2], L. N. Shilova[1], V. A. Aleksandrov[2], I. A. Zborovskaya[1]

[1]Volgograd State Medical University, the Department of Hospital Therapy, [2]Federal State Budgetary Institution, Research Institute of Clinical and Experimental Rheumatology A.B. Zborovsky, Volgograd, Russia

**Objective:** To assess the severity of calcification of heart valves according to echocardiography and the possibility of using this criterion to predict the progression of valvular lesions in patients with rheumatoid arthritis (RA) and osteoarthritis (OA).

**Methods:** 60 people were examined: the main group - 30 patients with RA with moderate activity (26 women and 4 men aged 32-66 y; average disease duration 7.42±4.12 y), comparison group - 30 patients with OA knee joints (22 women and 8 men aged 38-64 y; the average duration of the disease is 8.25±5.39 y). The study of morphological and functional changes in the heart and its valves was performed by echocardiography using the Accuvix V10 ultrasound diagnostic system (Medison, Korea). The following

gradations were used in assessing the grade of calcification of the aortic valve (AV) and mitral valve (MV) of the heart: 0 -no calcification, 1st degree -unexpressed calcification, 2nd degree -moderate calcification, 3rd degree -pronounced calcification of heart valves.

**Results:** In the main group, ultrasonic signs of calcification of the heart valves (AV and / or MV) were significantly more frequent compared with patients from the comparison group (53.3% of cases vs. 20%; p<0.004). There is a high prevalence of AV calcification of varying severity (in 40% of cases vs. 13.3% in the comparison group; p=0.01) and slightly less detectable calcification of MV (in 33.3% of cases vs. 6.7% in comparison group; p=0.005) in patients with RA. In the main group, the prevalence of patients with a 2-3 degree of calcification (AV and MV in comparable proportions) of heart valves was observed (stage 1 in 2, stage 2 in 9, stage 3 in 5 people), and in the comparison group the prevalence of patients with a 1st degree of calcification (mainly AV) of heart valves (stage 1 - in 5, stage 2 - in 1 person) was observed. A combined calcification of AV and MV was recorded in 20% of cases in the main group. There were no patients with this pathology in the comparison group.

**Conclusion:** The presence of an autoimmune chronic inflammatory process causes the greatest risk of developing cardiovascular complications in patients with RA and accelerates the processes of calcification of heart valves. To assess valvular lesions can be used a simple and effective test - determining the severity of calcification of heart valve according to echocardiography.

## P1145

## SERUM PERIOSTIN LEVELS IN FIBROUS DYSPLASIA: ITS USEFULNESS AS DISEASE BIOMARKER - AN EXPLORATORY STUDY

M. S. Mastaglia[1], G. D. González[2], T. W. Tetzlaff[3], B. M. Bonnano[1], G. R. Gianotti[4], F. C. Fernandez[2], G. G. D. Gómez Glorioso[2], O. B. Oliveri[1]

[1]Osteoporosis and Metabolic Bone Diseases Laboratory, Clínicas Hospital, School of Pharmacy and Biochemistry, University of Buenos Aires, [2]Mautalen, Health and Research Institute for Research in Public Health (IDISA), [3]Clinical Biochemistry Unit, Clínicas Hospital, School of Pharmacy and Biochemistry, [4]Mautalen, Health and Research Institute for Research in Public Health (IDISA), Buenos Aires, Argentina

**Objective:** Fibrous dysplasia (FD) is a rare, non-hereditary bone disease caused by a somatic mutation of GNAS gene. Periostin (Postn) is a new marker, linked to bone repair processes. We aimed to assess Postn sensitivity as disease activity marker of FD.

**Methods:** An exploratory case-control study was led, with 15 FD patients, paired by age and gender with healthy subjects (controls). Postn serum levels were gauged in FD patients and controls, also according to clinical manifestation. In the same assay, with serum samples stored at -80°C, Postn was measured by the ELISA method (Sigma Aldrich; St. Louis, USA), [coefficient of variation (%CV) intra-assay <10% and interassay <12%]. Statistical analysis: an R Core Team 2018 processor was used (https://www.R-project.org). A nonparametric test (Mann-Whitney)was used to compared Postn serum levels between the groups. ROC curves were used to find optimal cut-off points and analyze Postn sensitivity (predictive value).

**Results:** 15 FD patients (polyostotic 40%, monostotic 33% and McCune-Albright syndrome 27%), with an average age (X±DS) of 44.3±10 y. In our FD patient cohort, no statistically significant differences were observed between Postn and control group (FD: 51.1±10 ng/ml vs. control: 44.2±15 ng/ml; p=0.15) nor by FD clinical form (polyostotic: 51.8±9.1 ng/ml vs. monostotic: 49.6±13 ng/ml; p=0.66). Figure 1 shows the ROC curve obtained and optimal cut-off points.

**Conclusion:** Postn serum levels did not show statistically significant differences compared to control group or by clinical manifestation, showing low sensitivity as disease activity marker of FD.

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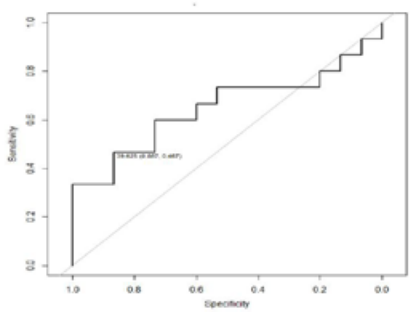


Figure.1: ROC curve graph with the respective optimal cut-off points, showing Postn low sensitivity as FD activity marker.

## P1146

## BONE BENEFITS FROM PUBERTAL EXERCISE ARE SUSTAINED AFTER DETRAINING IN MALE RATS

T. Mustafy[1], I. Londono[2], F. Moldovan[2], I. Villemure[1]

[1]Polytechnique Montréal, [2]CHU Sainte-Justine, Montreal, Canada

**Objective:** During the adolescent period, rapidly growing bones react to induced mechanical stimuli. Mechanical loadings, such as daily physical activities, can positively contribute to skeletal development. However, it is still unclear whether the effects induced by mechanical loading during adolescence remains in adulthood. The current study investigated the effects of *in vivo* low (LI), medium (MI), and high (HI) impact loadings applied during puberty on longitudinal bone development, morphometry and biomechanics at adulthood using an animal (rat tibia) model.

**Methods:** 4-week-old rats were randomized into control, sham, LI, MI, and HI groups (n=42). Rats underwent a 41-week detraining period after 8 weeks of cyclic (2 Hz) loading on the right tibia with 5 d/week loading regime (1200 cycles/d). Rats were sacrificed at 52-week-old. Bone microstructure and strengths were investigated using micro-computed tomography and mechanical testing, at the end of puberty and during detraining (Fig. 1). Statistical analyses were performed to compare the groups for any significant change due to the pubertal loadings (p<0.05).