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AbstractBook

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

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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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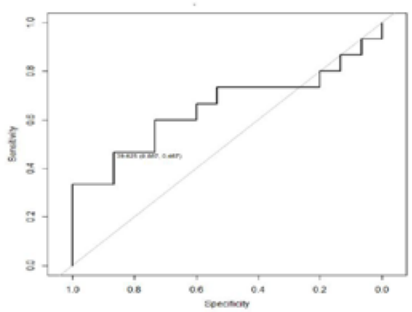

Figure.1: ROC curve graph with the respective optimal cut-off points, showing Postn low sensitivity as FD activity marker.

P1146

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

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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).