Bones diseases, including osteoporosis and osteo-
immunology: aetiology, pathology and animal models.

AB0079 ANGIOPoETIN-LIKE PROTEIN TYPE 3 AS AN INDICATOR OF RHEUMATOID INFLAMMATiON AND RESORPTION OF BONE TISSUE IN RHEUMATiD ARTHRiTIS

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Objectives: to study the role of type 3 angiopoietin-like protein (ANGPTL3) in the development of osteoporotic processes associated with inflammation in rheu-
matoi disease (RA).

Methods: 88 patients with RA were examined (women - 100%, average age - 54.2 ± 12 years old, disease duration - 11.2 ± 8.7 years, positive for rheu-
matoi factor (RF-IgM) - 72.7%, positive for anti-citrullinated protein antibody (ACPA) - 67%), DAS28 activity: remission - 21.6%, minimal - 11.4%, medium - 35.8%, severe - 9.3%. The study was conducted on a bone X-ray densitometer LUNAR DPX (GE, USA). Most of the patients (96.6%) were residents of cities, and 67 (76.1%) people lived in the metropolis (number of inhabitants more than 1 million people).

The concentration of ANGPTL3 in serum was determined by enzyme immuno-
assay using a commercial test system "Human Angiopoietin-like Protein 3 ELISA" ("Bio Vendor").

Results: Osteoporosis is found in 52 (59%) people. Increased ANGPTL3 values (> 445 ng/ml) were determined in 80.7% of cases. A significant positive correlation was found between the level of ANGPTL3 and the age of patients (r = 0.23, p = 0.032), the functional class (r = 0.214, p = 0.046), the presence of osteoporosis (r = 0.36, p = 0.039), living in the metropolis (r = 0.214, p = 0.046) and smoking (r = 0.31, p = 0.036), as well as a negative relationship with the duration of walking per day (r = -0.314, p = 0.003) and weekly (r = -0.319, p = 0.002) activity. The level of ANGPTL3 correlated with the activity of RA calculated by the DAS28-ESR index (r = 0.037), but not by the DAS28-ESR index (p = 0.135).

It is noteworthy that ANGPTL3 is closely related to changes in bone mineral density (BMD) in the femoral neck (BMD Total: r = -0.33, p = 0.042; BMD Troch: r = -0.36, p = 0.036; BMD Wards: r = -0.44, p = 0.009), but not in the spine (L1-L4) (p > 0.05). The lack of connection of ANGPTL3 with ACPA (p = 0.128) may indicate different mechanisms of influence on systemic BMD in patients with established RA.

Conclusion: ANGPTL3 can be used as an indicator of pathological pro-
cesses associated with rheumatoid inflammation and the development of osteoporosis. Living in a metropolis, smoking and low physical exertion has an additional negative effect on resorptive processes in bone tissue in women with active RA.

Disclosure of Interests: None declared

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AB0081 THE ROLE OF LOCAL BISPHOSPHONATES IN THE PRESERVATION OF THE BMD IN THE ZONE OF SURGICAL BONE DEFECT (ANIMAL STUDIES)

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Background: One of the reasons for failures in Arthroplasty is the preservation in the postoperative period in the bone adjacent to the implant of the prevalence of resorption over bone formation. The possibility of inhibition of resorption by bisphosphonates, including their local use in the composition of the biocomposite material, aggravates the situation due to the simultaneous oppression of bone formation. A low level of remodeling in these cases leads to a further loss of bone mass in the intervention zone.

Objectives: To evaluate in the experiment the effect of bisphosphonates in the biocomposite material on the bone mass both in the surgical intervention zone and in the segment as a whole.

Methods: The study was conducted as a comparison with the control. 60 females of white non-linear rats, body weight 130-150 g, were divided into 6 groups. In 3 groups, the defect of the tibia was filled with a biocomposite material in the form of a gel (pat-
ent No. 2325170) connected to various bisphosphonates Ibandronic acid (Bonviva), zoledronic acid (Aklata), alendronate sodium (Fosamax) was used in conjunction with a non-de-mineralized lyophilized bone implant. Groups, the defect was filled with a non-de-mineralized lyophilized bone implant with biocomposite material without bisphosphonate, in the second control group, non-de-mineralized lyophilized bone implants without biocomposite material in trety-defect is not filled.

Assessment of bone mineral density (BMD) in the intervention area and in the segment as a whole was performed using X-ray densitometry (Hologic, Small Animals Program Performing and Analyzing Small Animal Studies). Results Comparison (simple dispersion analysis) of the MIC of all groups using...