bone density was observed (by ~52%) as compared to controls (p<0.01). However, subjects taking these drugs for longer than 5 years did not show a significant difference (p=0.64).

Conclusions: Our results suggest that children taking psychostimulants for up to 5 years had slower bone healing following distal radius fractures. Orthopaedic surgeons planning elective surgeries should be cognizant of this as a potential issue in recovery after any elective bone procedures and pre-operatively optimize bone health as well as counsel patients and their families.

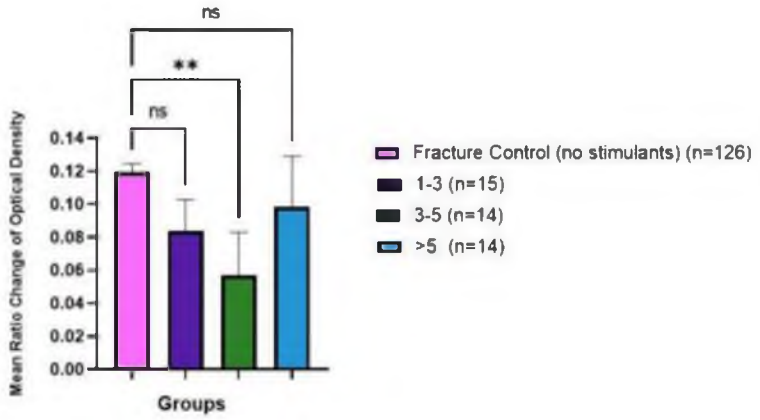

Figure 1: Mean +/- SEM Ratio Change of Optical Density of the Distal Radius Across the Duration of MP and MAS Use (in years). NS p>0.05, **p<0.05.

P097

The effect of 60-day administration of sodium benzoate and mexidol on the ultrastructure of the regenerate formed in the rat's tibiae

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Abstract Text

Sodium benzoate is a preservative widely used in the food industry. There is information about the ability of sodium benzoate to cause allergic reactions, to have a mutagenic, hepato-and nephrotoxic effects, adverse effect on the ultrastructure of regenerate formed in rat's tibiae.

The aim was to study the possibility of correction of changes in the ultrastructure of the rat's tibiae regenerate caused by 60-day administration of sodium benzoate with mexidol by using the X-ray diffraction analysis. The research was carried out on 120 mature white male rats. Animals of groups 1 and 2 were intragastrically injected for 60 days with sodium benzoate solution at dose of 500 and 1000 mg/kg/body weight, and then a through defect was applied in the proximal metaphysis of tibiae. The rats of the groups 3 and 4 - under similar conditions, 1 ml of a 5% solution of mexidol was administered intramuscularly at the dose of 50 mg/kg body weight. The terms of the experiment were 3, 10, 15, 24 and 45 days. The obtained data were processed by the methods of variation statistics.

In animals of the group 3, a decrease in the size of crystallites by 3.59% on the 15th day and an increase in the coefficient of microtexturing by 3.27%, 3.73% ($p<0.05$) from the 24th to 45th days were observed. In the group 4, the size of crystallites is decreased by 3.90%, 3.47% from 24th to 45th days and the coefficient of microtexturing increased from 10th to 45th days by 3.58%, 4.19%, 4.12%, 4.12% ($p<0.05$).

The use of mexidol against the background of a 60-day administration of sodium benzoate in different doses smoothed out the changes in the ultrastructure of the biomineral of rat's tibiae regenerate from the 15th day in the group 3 and from the 10th day in group 4.

P098

Multidisciplinary management of skeletal phenotype in a patient with Mucopolysaccharidosis IVA: a case report with six-year follow-up

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Abstract Text

Introduction. The mucopolysaccharidosis type IVA (MPS IVA) is a rare, autosomal recessive, lysosomal storage disease. The MPS IVA patients showed a severe skeletal phenotype characterized by mild-to-severe spondylo-epiphyso-metaphyseal dysplasia, and early osteoporosis.

Purpose. The enzyme replacement therapy (ERT, elosulfase alfa) stabilizes the MPS IVA evolution but not significantly influences the skeletal phenotype and bone mineral density. We described a MPS IVA adult patient with complicated osteoporosis treated with ERT and antiosteoporosis drugs.

Methods. The patient received ERT at dosage of 2 mg/kg once a week, zoledronic acid (ZA) 5 mg intravenously infused every year and cholecalciferol *per os* at dosage to guarantee 25OHD serum levels ≥75 mmol/l. Contextually, a normocalcic (calcium intake ≥1 g/day), hyposodic (sodium intake ≤ 5 g/day), and normocaloric (1800 kcal) diet was started. During a 5-years-follow-up, we programmed a six-minute walking test (6MWT), an electrocardiogram, the evaluation of bone pain and medication pain scores, and bone-related biochemical parameters every 6 months, as well as one week after each ZA infusion. A Dual Energy X ray absorptiometry (DXA) was programmed every 2 years.

Results. The integrated ERT-ZA-cholecalciferol-diet treatment causes a progressive and significant improvement of clinical symptoms, and DXA parameters in our MPS IVA patient

Conclusion. We propose to evaluate this integrated treatment of MPS IVA patients with osteoporotic phenotype in further and wider studies.

P101

Effect of FasL/Fas on dental pulp stem cells

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