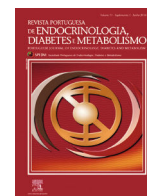


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### COMUNICAÇÕES ORAIS

#### CO01. POSTTRAUMATIC OSTEOPENIA IN RATS WITH DIFFERENT MODELS OF FEMUR FRACTURES

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**Introduction:** The reaction of skeleton to the fracture is an important problem in scientific and practical aspect. The majority of investigators pay attention to the changes in injured or (and) contralateral extremity. Data about systemic reaction of skeleton in various types of fractures remains poor and contradictory.

**Objectives:** To investigate a possible effect of femur fracture to bone mineral loss in vivo, using different fracture models.

**Methods:** A midshaft tranverse femur fracture in rats stabilized with intramedullary pin (n = 20) and perforated metadiaphysis fracture without immobilization (n = 20) were carried out. Control group (n = 20) was represented by non-operated animals. On 30<sup>th</sup> day of experiment, dual energy X-ray densitometry was performed. The DEXA results were evaluated based on the presence of internal artifact in rats with intramedullary osteosynthesis.

**Results:** In rats of control group stable increase of BMD of all sites of skeleton was observed. On the 30<sup>th</sup> day after fracture in rats with perforated metadiaphysis fracture we noticed increase of BMD of the majority sites of skeleton except statistically significant (p < 0.01) decrease of legs BMD. This reduction can be explained by increase in bone remodeling activity within cortical bone at the affected and probably opposite limb. In rats with the midshaft fracture fixed with pin, intensive loss of bone mass in all sites of skeleton was observed. Along with increased bone remodeling this decrease of BMD can be probably explained by increased consumption of calcium and recruitment of bone mineral needed for callus formation which is considerably larger in case of midshaft fracture. This fact was confirmed by statistically significant (p < 0.001) increase of legs BMD.

**Conclusions:** The type of fracture and size of callus affect the severity of post-traumatic osteopenia in rats with different types of femur fractures.

#### CO02. BONE MINERAL DENSITY AND TRABECULAR BONE SCORE IN PATIENTS WITH RHEUMATOID ARTHRITIS

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**Introduction:** Osteoporosis is a major clinical problem in rheumatoid arthritis patients.

**Objectives:** To evaluate influence of age, glucocorticoids taken on the trabecular bone score and bone mineral density in patients with rheumatoid arthritis.

**Methods:** The study included 134 female patients with RA (mean age – 52.4 ± 12.7 years; average duration of disease – 9.1 ± 7.6 years). The patients were divided into five groups by decades and they were divided into three groups depending on glucocorticoids (GC). using: G1 – 37 patients who didn't take GC, G2 – 47 patients who had been prescribed with GC only at exacerbation, G3 – 50 patients who received systemically GC at a dose of ≥ 5 mg. By the method of DXA (Prodigy, GE Lunar, Madison, USA) we measured BMD at the lumbar spine and femur neck. The index of the quality of trabecular bone tissue (TBS) using the method of TBS iNsight (Med-Imaps, Pessac, France).

**Results:** Significantly decrease BMD of lumbar spine (50-59 year. 0.994 ± 0.245 g/cm<sup>2</sup> vs 30-39 years. 1.141 ± 0.161 g/cm<sup>2</sup>; t = 2.1; p = 0.04) and femur neck (50-59 year. 0.716 ± 0.245 g/cm<sup>2</sup> vs 30-39 years. 0.889 ± 0.231 g/cm<sup>2</sup>; t = 2.4; p = 0.02) significantly reduce with age. Also the TBS beginning from 50 years at women, with RA, comparatively with women aged 30-39 years (1.156 ± 0.140 mm<sup>-1</sup> vs 1.318 ± 0.155 mm<sup>-1</sup>; t = 3.5; p = 0.001). With age the lowering of this parameter progresses. At the studying of influence of GCs was estimate that patients in G3, had significant lower only indexes of TBS L1-L4 comparatively with the patients in G1 (1.147 ± 0.168 vs 1.250 ± 0.135; t = -3.07; p = 0.003), or G2 groups (1.274 ± 0.138; t = 3.95; p = 0.0002).

**Conclusions:** TBS L1-L4 and BMD in different part of skeleton significantly decreased with age in women with RA. The admission GC associated with decrease of TBS, while significant changes of BMD of the lumbar spine and femur did not observe.

#### CO03. SARCOPENIA IN UKRAINIAN ELDERLY WOMEN

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**Introduction:** Sarcopenia is been defined as an age-related reduction in muscle mass, strength and performance.

**Objectives:** To evaluate the normative data of lean mass in Ukrainian normal healthy women.

**Methods:** 301 women aged 20-87 years (mean age – 57.6 ± 0.9 yrs; mean height – 1.62 ± 0.004 m; mean weight – 63.5 ± 0.5 kg, body mass index – 24.2 ± 0.2 kg/m<sup>2</sup>) were examined. The women were divided into the following age-dependent groups: 20-29 yrs (n = 25), 30-39 yrs (n = 27), 40-49 yrs (n = 22), 50-59 yrs (n = 62), 60-69 yrs (n = 91), 70-79 yrs (n = 59), 80-87 yrs (n = 15).