Alendronian in treatment of postmenopausal osteoporosis and its complications

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Alendronian in treatment of postmenopausal osteoporosis and its complications
(Alendronian w leczeniu osteoporozy pomenopauzalnej i powikłania z tym związane)

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Bisphosphonates is a new class of medicaments having a pronounced antiresorptive effect on bone tissue. Fosamax (alendronate sodium, trademark of MSD) is an amino-bisphosphonate acting as a powerful and specific inhibitor of osteoclast-induced resorption of bone tissue. To study the efficacy of Fosamax in the treatment of post-menopausal osteoporosis and its complications (vertebrae fractures) 25 women aged 56–75 years (mean age – 63,6±1,2 years) were

examined. Osteoporosis and its complications were diagnosed by means of ultrasound and roentgenography of thoracic and lumbar spine. 11 patients (44,0%) had vertebrae fractures of a clinoid type and compression. To evaluate structural-functional state of bone tissue ultrasound densitometer “Achilles+” (Lunar Corp., Madison, WI) was used. Speed of ultrasound spreading (SOS, m/sec), broadband ultrasound attenuation (BUA, dB/MHz) and Stiffness index of bone tissue (SI, %) were determined. Fosamax was prescribed in a dose of 10 mg, in the morning, on an empty stomach, 1/2 hour before the meal. Ultrasonometry and evaluation of pain syndrome’s pronouncement were carried out in 1, 3, 6, 12 months from the beginning of treatment. 25 patients (I group) were taking the drug for 3 months, 17 patients (II group) were taking it for 6 months, 11 patients (III group) were taking it for 1 year. Patients ceased taking drug because of financial difficulties and not because of absence of effect or side effect. 9 women taking Fosamax for 1 year were examined in 12 months after the end of treatment (they were included in the IV group). Fosamax considerably reduced pronouncement of pain syndrome and greatly improved structural-functional state of bone tissue: I group – SOS (before treatment – 1513±4 m/sec; in 3 months – 1514±4 m/sec); BUA (before treatment – 91,0±2,1 dB/MHz; in 3 months – 93,4±2,2 dB/MHz); SI (before treatment – 64,5±2,1%; in 3 months – 66,5±2,3%); II group – SOS (before treatment – 1512±6 m/sec; in 6 months – 1514±6 m/sec); BUA (before treatment – 90,4±2,5 dB/MHz; in 6 months – 96,8±3,2 dB/MHz; p=0,019); SI (before treatment – 64,0±3,0%; in 6 months – 68,7±2,9%; p=0,012); III group – SOS (before treatment – 1516±7 m/sec; in 12 months – 1518±6 m/sec); BUA (before treatment – 91,9±2,5 dB/MHz; in 12 months – 99,5±2,8 dB/MHz; p=0,030); SI (before treatment – 66,2±3,1%; in 12 months – 71,2±2,7%; p=0,036); IV group – SOS (before treatment – 1522±8 m/sec; in 12 months – 1525±8 m/sec; in a year after the end of treatment – 1516±10 m/sec); BUA (before treatment – 90,0±2,2 dB/MHz; in 12 months – 99,4±2,9 dB/MHz; in a year after the end of treatment – 97,6±4,5 dB/MHz; p<0,05 compared to the

parameter before treatment); SI (before treatment – 66,8±3,2%; in 12 months – 73,1±2,6%; in a year after the end of treatment – 69,6±4,3%). Results of our studies show Fosamax's efficacy in treatment of postmenopausal osteoporosis and its complications. The drug increases bone mineral density, improves its solid characteristics, which is followed by a considerable decrease of a pain syndrome's pronouncement and increase in functional abilities of patients.