ULTRASOUND DENSITOMETRY EVALUATION IN POSTMENOPAUSAL WOMEN WITH COLLES' FRACTURE

II Środkowo Europejski Kongres Osteoporozy i Osteoartrozy oraz XIV Zjazd Polskiego Towarzystwa Osteoartrologii i Polskiej Fundacji Osteoporozy, Kraków 11-13.10.2007
Streszczenia:
Ortopedia Traumatologia Rehabilitacja 2007, vol 9 (Suppl. 2), s1172-173.

P28
ULTRASOUND DENSITOMETRY EVALUATION IN POSTMENOPAUSAL WOMEN WITH COLLES' FRACTURE

Povoroznyuk V. V., Vayda V. M.

Department of Clinical Physiology and Pathology of Locomotor Apparatus,
Institute of Gerontology AMSU, Vyshgorodskaya str. 67, Kiev, 04114, Ukraine

This research was aimed at studying the bone tissue state among women with Colles' fracture with aid of the ultrasound densitometry method. The total of 34 healthy postmenopausal women 42–74 years old (62,1±7,5) having Colles' fracture in their anamnesis (CF) were examined by ultrasound bone densitometer "Achilles+" (Lunar Corp., Madison, WI). The control group included postmenopausal women without any osteoporotic fractures in their anamnesis (WF), being standardized by age, BMI, etc. The speed of sound (SOS, m/s), broadband ultrasound attenuation (BUA, dB/MHz) and a calculated "Stiffness" index (SI, %) were measured. The main risk factors for the osteoporotic Colles' fracture turned out to be a menarche after 15 years, an early and late menopause. 29,3% of patients with Colles' fractures had a bone tissue

stiffness index coinciding with the limit of fracture risk or under it.

There was no revealed relation between the age and the ultrasound densitometry indices among women of posmenopausal age without fractures. Only 12,5% of patients with Colles' fractures were noticed to have a normal bone tissue.

The ultrasound parameters were veritably lower among postmenopausal women with CF than among WF (SOS: CF – 1524□28,4; WF – 1543□24,3, $p < 0,05$; BUA: CF – 102□17,8; WF – 109□12,0, $p < 0,05$; SI: CF – 76□14,9; WF – 85□13,5, $p < 0,05$; all values are the mean □ SD). It is caused by the decrease of bone tissue mineral density, it's accelerated aging, and the development of osteopaenia and osteoporosis.

The most tangible differences in these indices were noticed among the elderly patients. Colles' fracture indicates osteopaenia and osteoporosis in postmenopausal period. In summary, ultrasound densitometry is an effective screening method to reveal the women of risk group having future osteoporotic Colles' fracture in postmenopausal period.