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APPLICATION THE IOF'S ONE-MINUTE OSTEOPOROSIS RISK TEST IN SCREENING OF STRUCTURAL-FUNCTIONAL CHANGE OF BONE IN POSTMENOPAUSAL WOMEN

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Background

This research was aimed at proving validity of IOF's One-Minute Osteoporosis Risk Test and evaluating the relation between structural-functional state of bone according to the ultrasound densitometry and results of IOF's One-Minute Osteoporosis Risk Test for postmenopausal women.

Materials and methods

We've examined 147 postmenopausal women aged 50-69 years (mean age 59,8 ±0,7). Structural-functional state of bone was evaluated by means of an ultrasound bone densitometer ("Achilles+"). The speed of sound (SOS, m/s), broadband

ultrasound attenuation (BUA, dB/MHz) and a calculated "Stiffness" index (SI, %), T and Z-range were measured. IOF's One-Minute Osteoporosis Risk Test was translated into Ukrainian.

Results

Significant correlation was found between positive answer to question 2 ("Have you broken a bone after a minor bump or fall?") and SOS ($r = -0,17$; $p = 0,042$), BUA ($r = -0,28$; $p = 0,0005$), SI ($r = -0,25$; $p = 0,002$), Z-range ($r = -0,26$; $p = 0,015$); between positive answer to question 3 ("Have you taken corticosteroid tablets for more than 3 months") and SOS ($r = -0,16$; $p = 0,047$), BUA ($r = -0,29$; $p = 0,0003$), SI ($r = -0,21$; $p < 0,000001$), and between positive answer to question 4 ("Have you lost more than 3 cm (just over 1 inch) in height?") and the following indexes of structural-functional state of bone: SOS ($r = -0,32$; $p < 0,00001$), BUA ($r = -0,27$; $p = 0,00096$), SI ($r = -0,36$; $p < 0,000001$), Z-range ($r = -0,27$; $p = 0,0015$).

Conclusion

Application of IOF's One-Minute Osteoporosis Risk Test gives an opportunity to determine structural-functional changes of bone. Among the test questions, the most reliable and informative as for postmenopausal women proved to be questions 2 ("Have you broken a bone after a minor bump or fall"), 3 ("Have you taken corticosteroid tablets for more than 3 months") and 4 ("Have you lost more than 3 cm (just over 1 inch) in height?").