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The frequency of osteoporotic fractures in subjects with diabetes mellitus of middle and elderly age in the Siberian population**Elena S. Mazurenko**

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Aim: To study the frequency of osteoporotic fractures (OF) over the past 12 months in middle-aged and elderly people with type 2 diabetes mellitus (T2DM) and without carbohydrate metabolism disorder (CMD) in Novosibirsk

Methods: A representative population sample was examined in the frame of the international HAPIEE Project, Novosibirsk in 2003-2005 (9360 people aged 45-69 y.). The current analysis included 7363 men and women aged 50-69 years (only postmenopausal women were included). Using a structured questionnaire, information was collected on the prevalence of OF over the past 12 months, the presence of T2DM. Statistical analysis was performed by SPSS program (v.13.0).

Results: Among 7363 examined persons with DM2 - 11.8% (n = 871), among them 3.0% (26 persons) had OF, fractures occurred in women 2 times more often than in men (3.8% and 2.0%, respectively), without reaching significant differences, $p = 0.111$. Among individuals without DM (n = 6492), OF occurred in 3.7% (241 people): in 4.0% of women and 3.4% of men, $p = 0.171$. There was no difference when comparing the incidence of fractures in people with and without T2DM for both men (2.0% vs. 3.4%, $p = 0.138$) and women (3.8% vs. 4.0%, $p = 0.850$). Among people with T2DM in different age subgroups who had OF, no significant differences were found both between men and women, and with increasing age. Women without T2DM in the subgroup 65-69 years of age had the highest incidence of OF than men ($p = 0.041$).

Conclusion: In studied Siberian population sample aged 50-69, the frequency of OF among people with T2DM and without CMD was comparable (3.0%, 3.7%, respectively). There were no differences in the incidence of fractures in men and women with and without T2DM. However women 65-69 years without diabetes suffered fractures more often than men.

Biography

Mazurenko Elena has experience in studying such complications of diabetes as osteoporotic fractures in the Siberian population. This is the main focus of her scientific work. This direction is relevant, given the more severe weather conditions in Siberia, and it is of practical importance for diagnosing and assessing the risk of fractures in Novosibirsk residents. Within the framework of the international project HAPIEE in 2003-2005, a representative sample of 9360 people was studied. The cohort was resurveyed twice in 2006/08 and 2015/18. Based on the data obtained, she determined the frequency of osteoporotic fractures, both in people with diabetes mellitus and without it, validated the FRAX scale for residents of Novosibirsk, and developed a point of therapeutic intervention for the treatment of osteoporosis.