

# PREVALENCE OF RISK FACTORS OF OSTEOPOROSIS, RISK OF FRACTURES AND QUALITY OF LIFE IN INDIVIDUALS WHO HAVE SURVIVED FEMORAL NECK FRACTURE

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**Aim.** The aim of the study was to estimate the prevalence of clinical risk factors for osteoporosis and calculate a 10-year

probability of a major osteoporosis-related fracture and to assess the quality of life (QL) in those who have survived a femoral neck fracture.

**Materials and methods.** In February 2011 we questioned 12 subjects (11 females and 1 male) aged  $72,7 \pm 13,3$  years who suffered femoral neck fracture in 2008-2009 yr. All subjects performed the adapted IOF osteoporosis risk test (18 questions). The QL was estimated by means of the computerised NAIF method. The integral QL index (IQLI) including six constituents- physical mobility, emotional state, sexual function, social status, cognitive function and economic status- was calculated in percents. QL was considered slightly reduced if IQLI amounted 75-100%, moderately reduced if IQLI was 50-74,9% and considerably reduced if IQLI was lower than 49,9%. A 10-year fracture risk was assessed by FRAX<sup>TM</sup> (polish population) which included evaluation of the body mass index (BMI) and presence of clinical risk factors for a fracture (densitometry was not performed). The risk of a major osteoporotic fracture higher than 11% was considered high. Statistical analysis of the results was done with the help of the program «STATISTIKA 7.0».

**Results.** 11 subjects were non-working pensioners, only one individual was still at work. 25% subjects had higher education, 75% had specialized secondary education. The most common somatic pathology was arterial hypertension – 78%, less common – ischemic heart disease – 46%. None of the respondents had conditions leading to secondary osteoporosis or took glucocorticosteroids in the past. All subjects had pains in the back, bones and visual impairment.

Nonmodifiable risk factors of osteoporosis included bone fractures after a minor trauma after 50 years – 75%, height reduction of 3 cm and more after 40 years – 67%, fracture of femoral neck in parents – 8%, menopause before 45 years in women – 46%, ovariectomy before 50 years – 9%. Modifiable risk factors included fear of falling – 83%, low daily physical

activity – 58%.

50 % respondents couldn't stand milk and dairy products, 42% stayed in the fresh air for less than 10 minutes daily which resulted in insufficient calcium intake and vitamin D production, 8% were smokers.

BMI averaged  $25,1 \pm 2,9$  kg/m<sup>2</sup>. A 10-year risk by FRAX™ for major osteoporotic fracture averaged  $14,5 \pm 9,1\%$ , for hip fracture  $6,4 \pm 5,4\%$ .

IQLI in the group was moderately reduced –  $50,8 \pm 7,7\%$ , and in 6 subjects – considerably reduced due to low physical mobility and emotional state.

**Conclusions.** Thus individuals with a femoral neck fracture in the past history were present with modifiable risk factors for osteoporosis, high 10-year risk of fractures and reduced QL. All respondents needed administration of anti-osteoporotic agents, calcium and vitamin D irrespective of the results of densitometry.