

Abstract

This diploma thesis deals with risk factors of osteoporosis and fractures among people older than 65 years. Theoretical part contains the definition of osteoporosis, physiology of bones, hormonal regulation, determinants of disease, clinical manifestation, prevention of disease and old age. Essential chapters of theoretical part are about moving activity and nutrition.

Aim of this thesis was to evaluate the occurrence of osteoporosis and risk factors of fractures in connection with risk nutritional factors. The research includes 86 responders, who filled out the questionnaire of risk factors and the risk of fractures was found out using FRAX tool. Based on these results patients were divided into 2 groups: with high risk and low risk of fractures. 10 patients of each group provided 3-day menu. The densitometric examination was accomplished to 30 responders and the probability of fracture formation was evaluated.

The results of diploma thesis show, that 45 % of responders have higher risk of fracture formation. This group has significantly higher age and lower BMI. This research then showed that patients with higher risk of fracture formation get significantly less energy, proteins, fats, carbohydrates, and calcium. Moreover, most of participants has insufficient intake of dairy products and fish.

Key words: osteoporosis, risk factors, risk of fracture formation, calcium, vitamin D, nutrition