

ABSTRACT

Introduction: Osteoporosis is one of the most frequent bone metabolic disease. It is a systemic metabolic skeleton disease, where the architecture of bone tissue is damaged due to the loss of bone mass, and therefore the bone quality is reduced. Thus, it comes to increased bones fragility and reduction in mechanical resistance, which leads to a higher risk of fractures. The principle of pathogenesis is an imbalance between resorption and bone formation. Due to increasing lifetime and lifestyle changes, the prevalence of the disease increases.

Aim: The aim of the practical part of the diploma thesis is to evaluate the eating habits of postmenopausal women treated for osteoporosis and to evaluate their nutritional condition in relation to bone mineral density (BMD).

Methods: Nutritional habits were obtained and evaluated through a questionnaire survey. Three-day meal records were collected and analysed using the Nutriservis Profesional nutritional software, to determine the energy intake and selected nutrients. Osteodensitometric data were measured using dual emission X-ray absorptiometry (DXA).

Results: The analysis of the diet showed that the observed group of women consumes an excessive amount of energy on average, especially in form of fats. Higher intake of protein was also observed. Furthermore, the protein intake was always observed in more detail throughout the day. On the contrary, very low intake from food was found for calcium and vitamin D. On average the calcium intake was 746 mg as opposed to recommended 1500 mg. The average daily level was 31,5ng/ml. Due to the lower calcium intake and increased phosphor intake, it came to an inappropriate ratio between these two elements. In conclusion, it was confirmed, that the BMD of women receiving sufficient quantities of protein, was higher, especially in the cortical bone in the radius area.

Conclusion: The observed inappropriate eating habits, which occur in patients, have a negative effect on the skeleton, and may further worsen the existing disease. Quality nutrition together with physical activity, is an essential part of pharmacological treatment, and it should be considered that way.

keywords: Osteoporosis, eating habits, proteins, calcium, vitamin D