

OSTEOPOROSIS CAUSED BY HORMONE S DISTURBANCES: POSSIBILITY OF TREATMENT

Summary: a very serious disease, characterized by low bone mass and microarchitectural deterioration of bone tissue with increasing bone fragility enhanced bone and a consequent increase in fracture risk. There are many causes of osteoporosis but the most common by far is due to the decrease in the amount of bone which occurs after the menopause, the so called postmenopausal osteoporosis.

In the osteoporotic bone the cortical shell and the trabeculae become thinned, and the architecture of the cancellous bone is destroyed.

Osteoporosis is one of the most common diseases affecting the elderly part of the population, i.e. they have a potential risk of fracture because the bone mass has decreased to a critical low level. A minor trauma may thus move a person from being „healthy” to being a patient with serious osteoporosis. In the United States 1.6 million people will experience an osteoporotic fracture every year. In the US osteoporosis is estimated to cost about \$ 14 billion each year. That means that the osteoporosis is an extremely expensive disease.

The clinical significance of osteoporosis lies in fracture. Bone loss occurs in both sexes in later life but is much more marked in women. The majority of osteoporotic fractures occur in elderly women, mainly due to the increased longevity of the population (femur, wrist, pelvis). Why women? When a woman passes the menopause her estrogen production declines. This hormonal reduction results in an imbalance in the bone turnover. Women live longer than men and therefore exposed for longer periods with reduced bone density.

Osteoporosis may be prevented or treated, and further bone loss may be stopped, and the bone mass may even be increased to a small extent. However, the original bone mass and the disrupted architecture of the osteoporotic bone will never be normalized, and the patient will continue to be at increased risk of getting new osteoporotic fractures. Prevention of osteoporosis is therefore a very important issue for the society, and the patients. Time of life where it is rational to perform diagnostic tests to establish the risk of osteoporosis is the menopause.

About 25–30% of all early postmenopausal women lose more than 3 per cent of bone mass per year („fast” bone losers), whereas 70–75% lose less than 3% per year („normal” bone losers). It is important to be able to identify the „fast bone losers” in order to institute preventive therapy in due time.

We can conclude that the optimal screening procedure is necessary to predict the future risk of developing osteoporosis.

Key words: Osteoporosis, hormone's disturbances, optimal screening