

Oral presentation

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Senile osteoporosis - two models of physiotherapy

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Background

Osteoporosis is a big problem medically, economically, and socially. The main consequences of osteoporosis are fractures that lead to disability and death in the elderly population.

Aim

The aim of this prospective study is to evaluate the effectiveness of two models of physiotherapy in a population of in-patients with senile osteoporosis (short-term analysis - 3 weeks).

Materials and methods

Thirty four females with senile osteoporosis, aged 65-84 years, were examined. All patients were divided into two randomized groups. Both groups participated in the same physiotherapy program (antigravity, strengthening, balance, stretching, coordination, circulatory, respiratory, relaxation exercises). The only difference between the two groups was the type of walking training performed on a treadmill; group "F" was instructed to walk forward, and group "B" was instructed to walk backward. Two parameters assessed: the strength of the knee extensor muscles (by tensometry) and correction of thoracic kyphosis (by pluri-meter-V).

Results

A statistically significant increase of knee extensor torque was observed. The increase was significantly higher in group "B" in comparison to group "F". The correction of thoracic kyphosis was seen in both groups.

Conclusion

Using backward walking training in the physiotherapy of female senile osteoporosis patients, a greater increase in the knee extensors torque is appreciated compared with patients who undergo physiotherapy training that employs forward walking. Patients who participated in physiotherapy that included backward walking training experienced significant postural improvements in senile osteoporosis.