

Prevention of Osteoporotic Fractures by Complex Physical Treatment with Horizontal Therapy

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PROGRAMME AND ABSTRACTS

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Objective: To show whether a complex physical treatment with H therapy is able to reduce the fracture risk in patients with reduced bone mass.

Material and Methods: Subjects were divided into two groups: I- control group: 157 individuals without physical or drug therapy. II- HT group: 150 patients who had HT and kinesytherapy. The investigation was carried out on individuals with reduced bone mass (with a T-score of $-1,7$ SD or less) between November 2005 and February 2008. BMD measuring was done twice with a time interval of at least one year between measurements with a DTX 4000 Osteodensiotometer at the distal forearm. Patients in HT had basic mobility and due to paramedical reasons were not using any prescribed medications. Patients had two cycles of physical treatment with a total of 30 therapies over a one year period. Ten physicians independently determined physical treatments for their patients. A questionnaire with risk factors for osteoporosis (OP) was filled out for each patient, and at least a year later all patients were surveyed for quality of life and reported any new fractures.

Results: There had been no gender, age, risk factor frequency, and OP fracture frequency difference among the two groups. After the treatment and survey we got the results which were statistically significant in HT regarding BMD increasing, and the incidence of new OP fractures in control group is highly statistically significant ($p < 0,001$).

BMD findings and OP fracture incidence

	CONTROL GROUP (157)	HT GROUP (150)
BMD before treatment	0.347 g/cm ³	0.353 g/cm ³
BMD after treatment	0.332 g/cm ³	0.363 g/cm ³
OP fractures before treatment	33	31
OP fractures after 1-3 years	7	2

$p < 0.001$. Positive results of HT treatment on quality of life and low back pain are noted.

Questionnaire for quality of life and effects on low back pain

	CONTROL GROUP (157)	HT GROUP (150)
Low back pain -no change	20%	41%
Low back pain - improvement	15%	37%
Low back pain - worsening	65%	22%
OP diet usage	57%	70%
Physical activity	48%	67%
OP exercises	0%	55%
Sunbaths	55%	82%

Conclusions: 1) Patients without HT treatments are at greater risk for new OP fractures and further bone mass deterioration. 2) HT has positive effect on the reduction and occurrences of lower back pain. 3) Positive results may be attributed to education and frequent physician to patient contact.

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