

EVALUATION OF PHYSICAL CAPACITY AND DISABILITY IN OSTEOPOROTIC WOMEN

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Background: The vertebral fractures result in increased kyphosis angle. This alteration could led to disturbance in physical capacity.

Objectives: Our objective was to evaluate the physical capacity and disability in a group of osteoporotic patients.

Methods: Fifteen women with osteoporosis and vertebral fracture (G1), 20 women with osteoporosis without vertebral fracture (G2) and 20 normal women (G3) were selected. The variables of physical capacity were measured in the belt conveyor. The patients stayed 4 minutes in standing quietly, 4 minutes walking at 3 km/h and 10 minutes walking at 4 km/h. It was also applied the questionnaire SF-36.

Results: Our results showed that women osteoporosis and vertebral fracture had increased kyphosis angle (median = 60 degrees) and the G2 was 43.5 degrees and G3 was 37 degrees.

G1 showed oxygen consumption (VO_2 (kg)), METS and energy expenditure (kcal/h) in standing quietly than G2 (G1 vs G2, $p = 0.016$; $p = 0.017$ and $p = 0.02$, respectively). There wasn't significant difference in the energy expenditure during the walking between three groups.

The energy expenditure during walking at 3 km/h, and at 4 km/h, showed correlation with thoracic kyphosis in G1 ($p = 0.01$ and $p = 0.017$, respectively).

It wasn't find difference in SF-36 between three groups.

Conclusion: Energy expenditure showed correlation with the angle of thoracic kyphosis. Patients with or without osteoporosis had the same energy expenditure during the walking. The SF-36 score was similar between three groups.