

## Treatment of Proprioceptive Disorders of the Elderly Subject by Modern Techniques

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### ABSTRACT

**Introduction:** The degenerative pathologies of the elderly are often associated with proprioceptive disorders and a major risk of falling. The treatment of these disorders in functional rehabilitation aims to improve postural control in the elderly subject by classic or instrumental modern techniques.

The aim of this work is to show the proprioceptive rehabilitation modalities by a modern technique (Thera Trainer Balo) in elderly fallers.

**Materials and methods:** This is a descriptive study of 4 patients hospitalized during the month of May 2018 at the physical medicine department of the Kassab Institute in Tunis.

We included elderly subjects (>65 years old) who were falling (during the anamnesis: buckling knees+/-fall in the last six months and on examination: unstable monopodal support + Get up and Go test > 2). We excluded elderly subjects with non-degenerative conditions and those with cardiovascular contraindication for active work.

The rehabilitation protocol is individualized, based on initial setting to identify the possibilities of movement in different directions, exercise choice with a setting based on the initial assessment to stimulate postural reactions for pathological directions. The duration of the exercise was fixed at 5 minutes followed by a rest period of 5 minutes then repetition according to the tolerance.

**Results:** We included 4 patients of average age 68 years and hospitalized for common polyarthralgia. Osteoporosis was objectified in 3 patients. For the study of the trajectory, we noted a decreased amplitude for the left and back movements for 2 patients presenting with bilateral osteoarthritis of the knee more severe on the left. So treatment was focused on postural stimulation on the pathological side. Two patients were able to carry out 2 successive sessions of 5 minutes whereas the 2 others could only do one because of the fatiguability. All the patients appreciated this method and required other sessions.

**Conclusion:** This technique allowed us to work safely for the fallers and to have an objective analysis of the deficiencies through the study of the trajectory. This alternative would be interesting in the elderly patient in combination with the specific treatment of the initial pathology.