

A NEW PHYSICAL THERAPY FOR PARKINSON'S DISEASE AXIAL DEFORMITIES: A PILOT STUDY

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OBJECTIVE

To evaluate the efficacy of a specific rehabilitation program (Progressive Modular Rebalancing with Proprioceptive Neuromuscular Facilitation of G. Monari, Kabat concept - RMP) on postural alterations and motor performance of Parkinson's Disease patients.

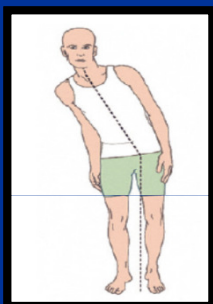
BACKGROUND

Parkinson's disease (PD) is a complex neurodegenerative disorder, affected 1,2 million people in Europe. In advanced PD characteristic symptoms may be associated with postural deformities.

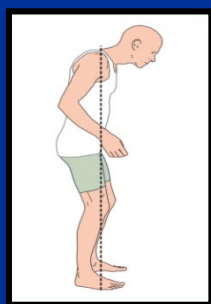
Camptocormia, described as stooped or bent posture, is the most recognised type of deformity. Pisa Syndrome, referred to a marked lateral flexion of the trunk, is less recognized but more disabling. Both phenomena are poorly responsive to antiparkinsonian drugs.

There are many researches on possible benefits of rehabilitation and exercise therapy in PD patients, but there are few studies about specific rehabilitation approaches. In our study we examined the role a specific rehabilitation on PD postural deformities.

PISA SYNDROME



CAMPTOCORMIA



METHODS

To examine the effects of RMP program (individual 60-minute-sessions, 2-days-a-week for three months) on postural alterations and mobility of 14 PD patients with Camptocormia, and 4 PD patients with Pisa Syndrome. Patients with severe osteoporosis, serious heart and respiratory problems, dementia and significant fluctuations in motor response were excluded.

Patients were evaluated using:
Unified Parkinson's Disease Rating Scale motor subscale (UPDRS-III)
Subitem 28 of UPDRS motor subscale
Webster Rating Scale (WRS) - Posture,
Tinetti-Gait Scale,

Protractor for Measuring degrees (FAT: anterior trunk flexion; FG: knee flexion)
Therapy was not changed during the three months of rehabilitation.

MODULAR PROGRESSIVE REBALANCE (RMP) OF G. MONARI

The proprioceptive neuromuscular facilitation (PNF) is a treatment method developed for the first time in America in the late '40s by Herman Kabat, physician and neurophysiologist.

Dr. Kabat's aim was to develop a practical methodology enabling physicians to analyze the motor action of a patient identifying at the same time the most efficacious strategies of functional movement.

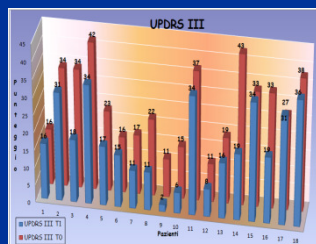
The PNF is therefore a means permitting simultaneous evaluation and treatment of neuromuscular dysfunctions. The PNF technique uses the proprioceptive system of the body to facilitate or inhibit the muscle contraction in order to improve such balance.

In Italy this technique was introduced in the late 60's by G. Monari, who - thanks to his experience in various study groups in Italian universities - elaborated and transformed it even modifying its name into Modular Progressive Rebalance (RMP) with neurokinetic facilities

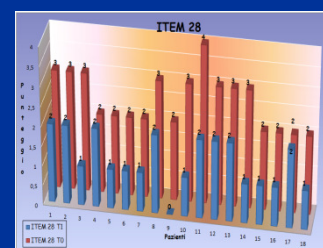
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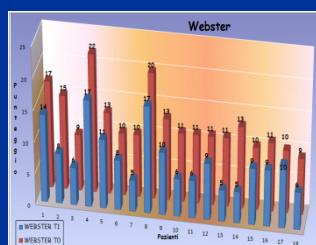
RESULTS



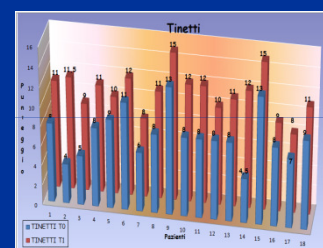
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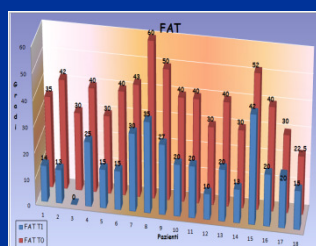
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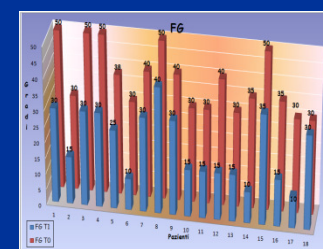
p = 0.001



p = 0.001



p=0.001



p = 0.05

CONCLUSIONS

Our data suggest that significant improvements in postural deformities can be obtained through the rehabilitation program described. It is necessary to conduct further studies with a larger sample and a longer follow-up.