**1**

**Balance Performance and Ankle Dorsiflexors Muscles Force in Elderly: A corelational study**

**Awny F. Rahmy and Shehab M. Abd El Kader**.

Department of Physical Therapy for Cardiopulmonary Disorders and Geriatrics, Faculty of Physical Therapy, Cairo University.

**Abstract**

BACKGROUND: Balance and muscle force deteriorate with aging. It has been suggested that a decrease in the ability to generate force in the lower extremity muscles contribute to balance impairment and falling. This study investigated the effects of the both resisted exercises and electrical stimulation for ankle dorsiflexors muscles force and their relation to balance control in elderly subjects.

*SUBJECTS AND METHODS:* Fifty healthy elderly subjects, their age ranged 65-75 years,

Participated in this study. Twenty five subjects (training group) were trained with resisted exercises electrical nerve stimulation of ankle dorsiflexors muscles, three times a week for 8 weeks. The group, included twenty five subjects, received no treatment intervention except

Encouragement for performing their usual activity of daily living over the 8 weeks of the study. The ankle dorsiflexors muscles force was measured by the hand held dynamometer in Kg and the balance control was measured by the Berg Balance Scale (BBS),the Functional Reach Test (FRT) the Timed Get Up-Go Test (GUG). These measurements were applied for both groups before after 8 weeks.

RESULTS: The BBS, FRT and GUG values showed significant changes (12.9%, 35.7% and 51.9% vecll1 Jely) following training in the trained group. There were no significant changes (0.67%, 95% and 14.4%) in the same measures of the control group after 8 weeks.

**Key words:**  Balance, Ankle Dorsiflexors Muscles Force, Resisted Exercises, Electrical Nerve stimulation and Elderly.

Bull. Fac. Ph. Cairo Univ.,:

Vol 9.No (2) Jan. 2004