P284-e
How medication can effect falls of the elderly
M. Pyrgeli∗, E.S. Pyrgelis, E. Agapiou
a Rehabilitation Center, Lamia's Clinic, Lamia, Greece
b Neurology Department, “Kat-Eka” General Hospital, Greece
c PRM Department, Greece
*Corresponding author.

Keywords: Falls; Medication; Osteoporosis

Introduction.– Fall is an unintentional drop of a person to the ground without influence of external factors or underlying disease. Falls are important health problem among people over 60 years old as being associated with fractures.

Methods.– Information collected by doctors using a medication logbook distributed to 300 people over 60, in the county and urban cities. Medication logbook underlines: age, sex, leaving area, diseases and relevant medications, falls and fractures during last 2 years. Participants were separated in groups according to their diseases and relevant medication in order to be compared.

Results.– Less falls appeared to groups suffering from cardiovascular or psychiatric diseases under relevant medications than the other groups. The group with osteoporosis/osteopenia had an increased incidence of falls, however only a small percentage of these had resulted to a fracture. Finally the group of eldest taking three or more different kind of medications (polypharmacy) presented high incidence of falls.

Discussion.– Polypharmacy was associated with increased falls’ incidence of the elderly (P < 0.01). Older people over 60, suffering from osteoporosis/osteopenia exhibited significantly more falls (P < 0.05) than older people with normal BMD, however individuals under medication for osteoporosis had less fractures due to falls than non-treated individuals.

http://dx.doi.org/10.1016/j.rehab.2014.03.559

P285-e
Relationship between fall risk factors, bone mineral density and fragility fractures in postmenopausal women
I.M. Borda∗, R. Unigur, L. Irsay, V. Ciortea, I. Onac
University of Medicine and Pharmacy “Iuliu Hatieganu”, Cluj-Napoca, Romania
*Corresponding author.

Keywords: Fracture fractures; Strength; Isokinetic; Balance

Introduction.– Fall risk is determined by both bone health and fall risk. Evidence suggests that postmenopausal women with reduced bone mineral density may have greater risk of falling than age-matched healthy women. The aim of this pilot study was to compare quadriceps strength, balance and functional mobility in decreased bone mineral density patients with and without fragility fractures.

Material and methods.– Fifty-two postmenopausal women, diagnosed with osteoporosis or osteopenia by dual-energy x-ray absorptiometry, participated in this observational cross-sectional study. Quadriceps strength (isokinetic dynamometry), balance (Berg scale) and functional mobility (Timed Up and Go test) were assessed. Fractility fractures were anamnestically or radiographically identified. Performance was compared between the 2 groups (with and without fractures).

Results.– Fractility fractures were identified in 19 patients (37%). Patients with fragility fracture history performed significantly worse than the others for all measured parameters (P < 0.05).

Discussion.– Impairments in balance, muscle strength or functional mobility increase the risk of fragility fractures in postmenopausal women with reduced bone mineral density. Therefore, in order to avoid fractures in this population, attention should be paid not only in restoring bone mass, but also in fall risk factors assessment and their adapted correction by comprehensive rehabilitation programs.

http://dx.doi.org/10.1016/j.rehab.2014.03.560

P286-e
Sensory peripheral neuropathy in lower limbs increases heel pressure ulcer risk in older adults
M.L. Gaubert-Dahan∗, K. Castro-Lionard, M.A. Blanchon, B. Fromy
a Service de Gériatrie Hôpital Bretonneau, Assistance Publique–Hôpitaux de Paris, Paris, France
b Département de Gériatrie, Centre Hospitalier Universitaire Saint-Étienne, France
c UMR CNRS, Laboratoire de Biologie Tissulaire et Ingénierie thérapeutique, Université Claude-Bernard, Lyon 1, France
*Corresponding author.

Keywords: Pressure ulcers; Aged; Peripheral neuropathy

Aim.– Correlate lower limbs’ sensory peripheral neuropathy and heel pressure ulcer.

Methods.– Patients included were admitted to a geriatric rehabilitation center in Paris and Saint-Etienne from March 2009 to June 2010. Patients with Mini-Mental State Examination less than 10 were not included, also hemiplegic and paraplegic patients. The presence of heel pressure ulcer was noted at admission and its stage. The sensory neuropathy severity was graded using Neuropathy Symptom Score (NSS) and Neuropathy Disability Score (NDS) as none (NSS = 0 or NDS = 0), light (NSS ≥ 3 or NDS = 1–5), moderate (NSS ≥ 5 or NDS = 6–16) and severe (NSS ≥ 6 or NDS > 16).

Results.– Of the 210 included patients (85 ± 6 mean years old; 75% females), 26 had heel pressure ulcer (stage 1: 13, stage 2: 7, stage 3: 4 and stage 4: 2) and 201 exhibited sensory neuropathy severity (light: 37, moderate: 121 and severe: 43). Heel pressure ulcer stage was correlated to sensory neuropathy severity (Pearson 0.22; P = 0.001).

Discussion.– The presence of sensory peripheral neuropathy in lower limbs increases heel pressure ulcer incidence and severity in older adults.

http://dx.doi.org/10.1016/j.rehab.2014.03.561

P287-e
Training of elderly people on a skiing ergometer (ThoraxTrainer). The effect of a four-week intervention with high intensity interval training; focus on core stability and balance
S. Andersen∗, P. Eiermann, K. Olsen
Metropolitan University College, Copenhagen, Denmark
*Corresponding author.

Keywords: ThoraxTrainer; Skiing ergometer; Ergometer; Anaerobe; Training; Elderly people; Balance; Core; Stability Skiing ergometer training; Core stability and balance; Rehabilitation of elderly; Double poling; Upper body strength and endurance; Balance training

Methods.– Ten healthy elderly men and women aged 65–82 performed 6 × 30 s high intensity intervals with 30 s pause, 2 times a week for 4 weeks in a skiing ergometer (ThoraxTrainer). They were divided in two groups: 1. Performing double poling on two legs. 2. Performing double poling on both two legs and one leg at a time. Performance and comparison of the two groups were tracked during three tests: the plank, LMC-tests and selected tests from BBS and BESTest.

Results.– We found improvement in all performed tests for both groups. LMC: Group 1 – 32.2% vs. Group 2 – 43.5%; Bergs/BESTest: 14.9% vs. 3.5%; Plank: 32.6% vs. 42.3%. Three of the four LMC-tests show significance (P < 0.05) or low significance (P < 0.10) that training in Group 2 gives a better result than training in Group 1. Training in a skiing ergometer (ThoraxTrainer) shows improvement for both groups in all tests. We found that group 2 had a big-