Abdominal compression in patients with neurogenic orthostatic hypotension

J. Basford, J. Figueroa, W. Singer, P. Sandroni, D. Sletten, T. Gehrkng, J. Gehrkng, P. Low

a Mayo Clinic, Rochester, United States
b Medical College of Wisconsin, United States

*Corresponding author.

Keywords: Orthostatic hypotension; Treatment; Abdominal compression

Introduction. – Orthostatic hypotension (OH) affects 5–30% of the elderly. Treatment is difficult and often involves the use of abdominal binders whose benefits are unclear.

Material and methods. – Thirteen adults with neurogenic OH participated in a randomized cross-over trial that assessed changes in median systolic blood pressure (SBP) as subjects shifted from a supine to standing position. Three manoeuvres were performed, supine to standing without binder, supine to standing with an abdominal binder (conventional or adjustable), and self-determined maximal abdominal compression at 5 minutes of standing.

Results. – Supine SBPs (146–153) with or without either of the abdominal binders were comparable. Standing without abdominal compression resulted in a severe orthostatic drop (SBP: -57 [Inter-quartile Range (IQR), -40 to -76] mmHg). Abdominal compression prior to rising using either the elastic (SBP: -50 [IQR, -33 to -70] mmHg; P = 0.03) or adjustable (SBP, -46 [IQR, -34 to -75] mmHg; P = 0.01) binder lessened OH. Adjustment of either binder to a maximal tolerable pressure while standing did not provide additional benefit.

Conclusion. – Donning of an abdominal binder prior to standing can ameliorate OH blood pressure drops but further compression once standing does not provide additional benefit.

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Depressive symptoms impact functional outcome in hip fracture patients

E. Dubljianin Raspotinovic, I. Nela

a School of Medicine, University of Belgrade, Clinic for Physical Medicine and Rehabilitation, Clinical Center Serbia, Belgrade, Serbia
b Clinic for Physical Medicine and Rehabilitation, Clinical Center, Serbia

*Corresponding author.

Keywords: Hip fracture; Depression; Functional outcome; Rehabilitation

Background. – Depression is the most common of mood disorders in elderly people. The role of depressive symptoms identified at an earlier stage after hip fracture remains understudied. The aim of this study was to evaluate if depressive symptoms assessed on hospital admission impact early functional outcome.

Methods. – We studied 112 patients who underwent surgery for hip fracture during a 6-month period. Depressive symptoms were assessed on admission to the acute setting using the 30-item Geriatric Depression Scale. The primary outcome measure was motor-FIM at discharge.

Results. – Presence of moderate to severe depressive symptoms (GDS ≥ 20), older age, and female gender were independently related to motor FIM at discharge.

Conclusion. – Increasing levels of depressive symptoms in elderly hip fracture patients influence short-term functional outcome. Failure to identify such patients is a missed opportunity for possible improvement of early functional outcome after hip fracture in elderly.

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Effects of management activities on the physical quality of walking with elderly over 80 years, suffering or not from dementia

F. Perucud, B. Kammoun, J. Bonis, B. Borel, S. Mandigout*

Laboratoire HAVAE, Limoges, France

*Corresponding author.

Keywords: Physical activity; Dementia; Gait

Objectives. – To evaluate the effects of a program of adapted physical activity, during eight weeks, on the parameters of gait in elderly demented subjects or not.

Methods. – The gait parameters were evaluated in 17 patients aged from 76 to 91 ans (7 demented, D, and 9 non-demented, ND) using Locometrix® before and after a physical activity program based on the balance, muscle strengthening and walking with three sessions per week.

Results. – We show a significant improvement (P<0.01) of the main gait parameters after the training program for the 2 groups: medio-lateral instability, ND 35 ± 7 vs 27 ± 8%, D 40 ± 12 vs 36 ± 8%; symmetry, ND 147 ± 30 vs 20 ± 33, D 156 ± 64 vs 212 ± 74; walking speed, ND 2.3 ± 0.5 vs 2.7 ± 0.4 km.h⁻¹, D 1.8 ± 0.7 vs 2.2 ± 0.5 km.h⁻¹.

Conclusion. – Our results suggest that physical activity improves gait parameters for the very elderly. Moreover, contrary to the results of the literature, no difference was observed in the responses to the program between demented patients and non-demented. This result can probably be explained by the particular characteristics of our study population living in EPHAD.

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Effect of a program of physical activities on the spatiotemporal parameters of walking in healthy 65-year-olds

J. Bonis, C. Laval, B. Kammoun, J. Lacroix, S. Mandigout

Laboratoire HAVAE, Université de Limoges, Limoges, France

*Corresponding author.

Keywords: Ageing; Physical activity; Parameters of walking

Introduction. – During the ageing, the modification of the parameters of walking is associated with the fragility and with autonomy. This deterioration is so marked that it is associated with cognitive disorders. The practice of a regular physical activity allows limiting these effects [1].

Objective. – Estimate the impact of a physical program of activities on the parameters of walking to healthy subjects of more than 65 years.

Subjects/Methods. – Thirty-five people: referent group (GT) (n = 14) (68.6 ± 4.9 years) and activity group (GAP) (n = 21) (71.3 ± 5.1years). The parameters of walking were registered with a triaxial accelerometer (Locometrix) on 40 m before and after the period of the study in simple and double task. The program of activity included exercises of endurance, strength, balance, (14 weeks, 3 sessions/week, 1 hour).

Results. – For the GT, the parameters do not show significant evolution. For the GAP, the parameters: frequency (Δ = 0.026c/s), regularity (Δ = 27), a symmetry (Δ = 33), total power (Δ = 1.84 W/kg) are improved after the program. The decrease of the walking speed in double task is less important for the GAP (ΔPre = 0.54/ΔPost = 0.27 m/s).

Conclusion. – This study shows that a program of activities allows the preservation, the improvement of the parameters of walking at the healthy elderly.

Reference

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