척수재활

게시일시 및 장소 : 10 월 19 일(토) 08:30-12:30 Room G(3F)

질의응답 일시 및 장소 : 10 월 19 일(토) 11:00-11:30 Room G(3F)

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Prevention Effect of whole body vibration on orthostatic hypotension in SCI patients–A pilot study

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Introduction

Orthostatic hypotension is a distressing and troublesome disorder after spinal cord injury(SCI). The mechanisms underlying orthostatic hypotension following SCI are unclear, but are likely to be multifactorial. Orthostatic hypotension results in cerebral hypoperfusion and several symptoms such as dizziness, fainting and syncope. This is a negative impact upon the ability of SCI individuals to participate in rehabilitation. Therefore, prevention and treatment of orthostatic hypotension in SCI patients is very important.

Methods

Participants were recruited from our hospital. Inclusion criteria were: cervical SCI patients with orthostatic hypotension symptoms above a certain angle at the tilt table. Participants were excluded if they had any condition, such as severe hip or knee flexion contractures >30°, and/or uncontrolled autonomic dysreflexia. A tilt table angle at which they began to show orthostatic hypotension symptoms was measured before treatment. After that, tilt table with whole body vibration treatment was applied for 20 minutes at the angle that orthostatic hypotension symptoms began to appear. A vibration frequency was 10 Hz and amplitude was 4.0mm. Ten treatment sessions were given for 2 weeks. The tilt table angle at which they began to show orthostatic hypotension symptoms was measured after treatment.

Results

Five participants A) 35 years old female, neurological level of injury C2, ASIA B by American Spinal Injury Association/International Spinal Cord Society(ASIA/ISCOS), B) 61 years old male, neurological level of injury C3, ASIA A, C) 55 years old male, neurological level of injury C5, ASIA A, D) 42 years old male, neurological level of injury C4, ASIA A, E) 75 years old male, neurological level of injury C5, ASIA D complete the intervention. In all patients, the tilt table angle was increased after treatment and there was no orthostatic hypotension symptoms at the pre-treatment angle. Patient A had an angle of 35 degrees before treatment and improved to 80 degrees after treatment.(35° → 80°), B(40° → 65°), C(70° → 85°), D(50° → 80°), E(45° → 70°).

Conclusion

A Tilt table with whole body vibration therapy in adults with SCI might help prevent symptoms of orthostatic hypotension.

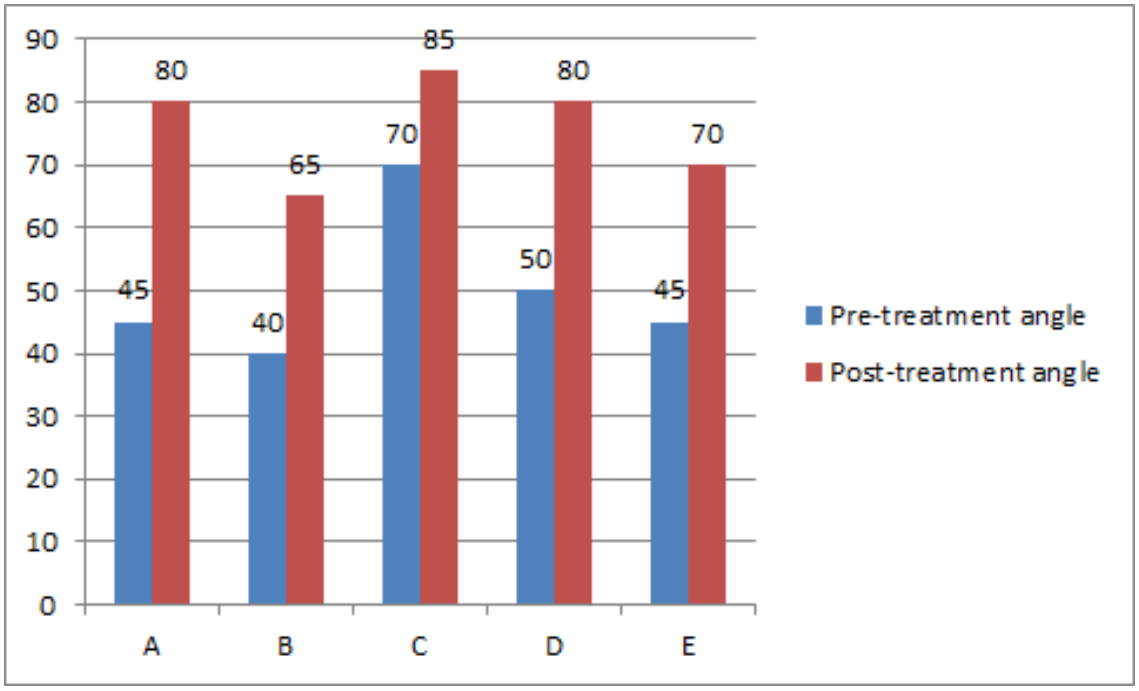

Fig 1