

Effectiveness of pelvic proprioceptive neuromuscular facilitation technique on facilitation of trunk movement in hemiparetic stroke patients

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Background: Pelvis has been described as 'key point of control' for maintaining a gait pattern. Therefore, techniques designed to affect the pelvic motion are widely used to improve control of pelvis such as Pelvic Proprioceptive Neuromuscular Facilitation (PNF). As the pelvic motion comes from trunk muscles, a specific use of pelvic pattern not only exercises the pelvis for mobility and stability but also facilitate trunk motion and stability.

Objective: To determine the effects of Pelvic PNF technique on facilitation of trunk movement in hemiparetic stroke patients.

Design: Randomized Control Study

Subjects: Thirty hemiparetic stroke patients

Setting: Neuro-Physiotherapy Department, Pravara Rural Hospital, Loni (Bk) - 413 736, Maharashtra State, India

Interventions: The experimental group received pelvic PNF while the control group received conventional physiotherapy for 30 minutes. Along with these both group received regular physiotherapy in the form of tonal management and range of motion exercises for the affected limbs for 30 minutes. Intervention was given once in a day for five days/week for four weeks.

Outcome Measures: Trunk Impairment Scale (TIS), Trunk Lateral Flexion Range of Motion (TLF ROM), and Tinetti Test (TT).

Results: Post-intervention, both the groups improved on trunk performance, range of motion, balance and gait but the experimental group shows more improvement than control group [changes in mean score between group comparison for TIS 3.4 (1.8); TLF ROM for affected and non-affected side 0.734 & 3.666 (0.267 and 2.533); Balance 3.534 (2.266) and Gait 2.2 (1)]. The level of significance was set at $p < 0.05$ and highly significance at $p < 0.01$.

Conclusion: The result of this study concluded pelvic PNF is effective on facilitating the trunk movement thus enhancing the trunk control, balance and mobility in hemiparetic stroke patients.

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