

Relation between near point of convergence and postural stability in subjects with nonspecific cervical pain.

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Abstract

Aim: Subjects with non specific cervical pain (NSCP) experience sensorimotor deficits thought to be due to abnormal cervical afferent input. Convergence insufficiency (CI) and postural instability may be features in (NSCP) and finding a relation between them might help to guide assessment and management.

Methods: Eighty subjects (male and female) with chronic non specific cervical pain; age ranged from 30 to 40 years with neck disability index score (NDI) $\geq 10\%$, can possess at least 45° of left and right cervical rotation and cervical pain persisted for 6 months or more. Convergence insufficiency evaluated by the near point of conversion (NPOC) rule and postural instability evaluated by Biodex balance system.

Results: There was significant positive correlation between (NPOC) and anteroposterior stability index (APSI) at neutral position, 45° right torsion and 45° left torsion was ($r = 0.82$, $p = 0.0001$; $r = 0.84$, $p = 0.0001$; $r = 0.87$, $p = 0.0001$) respectively. Since, the correlation between NPOC and mediolateral stability index (MLSI) at neutral position, 45° right torsion and 45° left torsion was ($r = 0.85$, $p = 0.0001$; $r = 0.73$, $p = 0.0001$; $r = 0.82$, $p = 0.0001$) respectively.

Conclusion: There was significant strong positive correlation between (NPOC) and (APSI) and also, between (NPOC) and (MLSI) in neutral position and when subjects were placed in right or left torsion.



Biography:

Tamer Mohsen 41years physical therapist, consultant of physiotherapy and managing the department of Egypt air hospital, having my MSc in neurology from faculty of physical therapy, Cairo University. Special interest with neurology and manual therapy. Having a professional diploma in nutrition from national nutrition institute, diploma in quality and FIFA

sports medicine diploma. Good experience with research evaluation and most recent evidence based practices.

Speaker Publications:

1. "Dawson N, Dzurino D, Karleskint M, Tucker J (2018) Examining the reliability, correlation, and validity of commonly used assessment tools to measure balance." Health Sci Rep 1:e98
2. "Della Casa E, Helbling J, Meichtry A, Luomajoki H, Kool J (2014).Head-Eye movement control tests in patients with chronic neck pain; Inter-observer reliability and discriminative validity. BMC Musculoskeletal Disorders"; 15: 16-27.
3. "Foisy A, Gaertner C, Matheron E, Kapoula Z (2015) Controlling posture and vergence eye movements in quiet stance: effects of thin plantar inserts." PLoS One 10: e0143693.
4. "Giffard P, Daly L, Treleven J (2017) Influence of neck torsion on near point convergence in subjects with idiopathic neck pain": 32:51-56
5. "Matheron E, Yang Q, Delpit-Baraut V, Dailly O, Kapoula Z (2016) Active ocular vergence improves postural control in elderly as close viewing distance with or without a single cognitive task", Neurosci. Lett. 6:24–29.
6. "Treleven J (2017) Dizziness, Unsteadiness, Visual Disturbances, and Sensorimotor Control in Traumatic Neck Pain. J Orthop Sports Phys Ther". 47:492- 502.

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