Use of Axial Myofascial Hydrostat Test in Identifying Areas of Focus for Osteopathic Manipulative Treatment to Relieve Symptoms of Hypermobility Ehlers Danlos Syndrome – A Case Study

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Background:

Hypermobility Ehlers Danlos Syndrome (HEDS), previously Ehlers-Danlos Syndrome type-III, is a connective tissue disorder with a prevalence of 1 in 5,000 people that present with clinical features in multiple body systems.1,2 The separating axial fascia of the thorax and abdomen form body tubes with several physiological functions, including maintaining the myofascial hydrostatic pressure within the tube compartments.3 Connective tissue laxity may prevent appropriate pressure changes, causing some of the HEDS features.4,5

Hypothesis:

The Axial Myofascial Hydrostat Test (AMHT) identifies myofascial strains in which to focus Osteopathic Manipulative Treatment (OMT) to help alleviate symptoms of HEDS.

Case Description:

A 19-year-old female with HEDS presented with 2-weeks of left rib pain, difficulty breathing, chest fullness, and dysmenorrhea. Examination revealed left 5th-rib exhalation dysfunction with torsion, right 3rd-rib inhalation dysfunction with costochondral separation, linea alba weakness with external-internal oblique imbalance, pelvic girdle instability, and grade I pelvic organ prolapse.

Methods:

An AMHT, which manually resists separation of the abdominal wall during deep inhalation, was used to identify connective tissue weakness preventing optimal exchanges of internal compartment pressure transfers. OMT techniques included muscle energy, myofascial release, HVLA, Still’s technique, visceral manipulation, and thoracolumbar and pelvic diaphragm releases.

Results:

On reassessment, AMHT was negative and muscle tone improved. Patient noted decreased pain, improved breathing, and decreased chest fullness with inhalation.

Conclusion:

This case demonstrated the use of the AMHT in identifying areas of focus for OMT in alleviating common features of HEDS. Further studies should investigate the efficacy of using AMHT to guide OMT in other HEDS patients.

References:


