



### Physical Therapy management of a patient with Hypermobile type Ehlers-Danlos Syndrome for treatment of Cervicogenic Headaches: A Case Report

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#### BACKGROUND & PURPOSE

Ehlers-Danlos Syndrome (EDS) is a group of diseases which is appears to affect 1 in 5,000 people worldwide by creating fragility in soft connect tissue that may have widespread manifestations in skin, ligaments, joints, blood vessels, and internal organs.<sup>1,2</sup> Hypermobile EDS (hEDS) is thought to be the most common type of EDS and typically presents with systemic joint and skin hypermobility as well as tissue fragility.<sup>2</sup>

Cervicogenic headaches (CGH) are a chronic type of headache that may demonstrate a wide spectrum of symptoms, but most commonly, presents with pain that originates in the neck and occipital regions and projects to the oculofrontotemporal region.<sup>3</sup>

According to Jull<sup>4</sup>, the Cranio-Cervical Flexion Test (CCFT) is used to measure the muscle endurance and strength of the deep neck flexors, specifically the longus colli and longus capitus. There has been an absence of research performed regarding treatment of hypermobility disorders, mainly hEDS, with the use of the CCFT.

The purpose of this case report was to demonstrate the management of a patient diagnosed with hEDS for treatment of Cervicogenic headaches with the use of the CCFT protocol.

#### CASE DESCRIPTION

##### Patient Background

- 15-years-old
- Ehlers-Danlos Hypermobile type

##### Patient Presentation

- Chronic headaches
- Joint Pain
- Poor Posture

##### Activity Limitations

- Long duration sitting
- School
- Karate

#### METHODS



CCFT Set-up position

#### RESULTS

Outcome Measure		Initial Exam	Final Exam
<b>Active Range of Motion (Degrees)</b>	Cervical Forward Bend	90 degrees	85 degrees
	Cervical Backward Bend	80 degrees	76 degrees
	Cervical Side Bend Right/Left	30 degrees/32 degrees	30 degrees/32 degrees
<b>Muscle Strength</b>	Low Trapezius	3+/5	4+/5
	Cranio-Cervical Flexion Test (CCFT)	Test terminated at 22 mmHg due to compensations	Test completed at 30 mmHg with no compensations
<b>Numeric Pain Scale Rating</b>	At Worst (During Headache)	8/10	4/10
	At Best (During Resting Period)	3/10	0/10
<b>Functional Self Report</b>	Neck Disability Index (NDI) (%)	25/45 or 55.6%	15/45 or 33.3%
	Frequency of Headaches	4	1

#### DISCUSSION

It is the authors opinion that the Cervicogenic headaches were the result of the Ehlers-Danlos Syndrome. The CCFT is a common evidence based examination and intervention utilized by physical therapists to effectively treat CGH.

By utilizing the CCFT protocol, the patient was able to decrease the frequency and intensity of Cervicogenic headaches as well as decrease the Neck Disability Index scores from 25/45 to 15/45 thus allowing the patient to be able to complete her school work without pain.



Poor Posture during school and videogames

#### CLINICAL RELEVANCE

Upwards of 30-40% of patients diagnosed with Ehlers-Danlos syndrome experience neck pain and headaches.<sup>5</sup> Ehlers-Danlos Syndrome has not been thoroughly researched for specific physical therapy treatment of Cervicogenic headaches. This case report demonstrated positive outcomes with the use of the CCFT protocol in treating patients with hEDS who are experiencing chronic Cervicogenic headaches.

#### EXERCISES



#### REFERENCES

