

Ehlers-Danlos Syndrome-Hypermobility Type: Can We Use Physical Therapy Manipulation?

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BACKGROUND & PURPOSE:

Ehlers-Danlos Syndrome-hypermobility type(hEDS) is a condition affecting around 3% of the world's population.¹

Ehlers-Danlos Syndrome-hypermobility type (hEDS) is a hereditary connective tissue disorder affecting type one collagen throughout the joints in the body. It has shown clinical manifestations of generalized joint hypermobility, chronic pain from related musculoskeletal manifestations, chronic fatigue, increased skin elasticity, depression, dysautonomia, and high levels of anxiety.²

The purpose of this case is to describe the clinical treatment plan for a patient diagnosed with Ehlers-Danlos Syndrome hypermobility type and determine the benefits of low grade physical therapy manipulation as an intervention.

CASE DESCRIPTION:

54 year old female diagnosed with Ehlers-Danlos Syndrome-Hypermobility Type one year prior.

Body Structure/Function

- Pain
- Decreased Lumbar/Cervical ROM
- Poor posture
- Hypertonic muscle guarding of the erector spinae
- Decreased passive intervertebral mobility from T1-4 & L1-S1
- Decreased neuromuscular core control

Activity

- Pt. unable to sit for longer than 30 minutes
- Pt unable to walk 1 mile without sitting down
- Unable to complete daily chores(i.e. cleaning, cooking, yard work)

Participation

- Unable to work
- Unable to go on long trips with family
- Pt unable to go to fitness class with her son

METHODS:

Week	Interventions	Goals
1	-Soft tissue elongation of paraspinals -manual stretch of upper traps/Quadratus Lumborum -Seated thoracic A/P (Figure 1) PT manipulation, general lumbar roll (Figure 2) PT manipulation -Postural Education	-Decrease guarding of soft tissue -Increase the length of tight musculature -Increase mobility of the spine -Increase Pt. postural awareness
2	Week 1 + the following: -Neuromuscular Re-education of TA, gluteus medius, multifidus	-Increase body awareness and muscular control in the new range
3	Week 2 + the following: -Half wall squat -core exercises	-Increase neuromuscular control in a seated position -Increase core stability
4	Week 3 + the following: -Seated posture, walking on treadmill, hip hinging.	-functional training

*2 Treatment sessions/week, 1 hour treatment sessions



Figure 1



Figure 2

RESULTS:

Week	1	2	3	4
VAS	8/10	6/10	6/10	5/10
Cervical ROM	SBR- 15°	22°	43°	49°
	SBL- 25°	27°	41°	48°
	Rot R – 45°	48°	51°	56°
	Rot L – 35°	45°	51°	52°
Lumbar SB ROM	Bilateral 1 inch above patella	Bilateral fingertips .5 inch above patella	Bilateral fingertips .25 inch above patella	Bilateral fingertips to patella
	Oswestry Disability Index	30/50= 60% disability		23/50= 46% disability

Key:

SBR- Side bending right
SBL- Side bending left
Rot R – Rotation right
Rot L – Rotation left

VAS- Verbal Analog Scale
ROM- Range of Motion

CONCLUSION:

- This case demonstrates the positive effects of physical therapy manipulation to improve lumbar/ cervical range of motion, decrease pain, and improve the overall function for a patient diagnosed with Ehlers-Danlos Syndrome-hypermobility type.
- This case is also supported in the literature in such studies as the one done by Pinnetti.³ Pinnetti reported positive outcomes of decreased pain and increased range of motion in the cervical spine after applying physical therapy cervical manipulation.³
- More research needs to be collected, however physical therapy manipulation should be considered as part of the treatment plan to create a full patient-centered model of care.

References

