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## Introduction

### Ehlers Danlos Syndrome

- A group of 14 recognized disorders that primarily affect connective tissues
- Results in joint hypermobility, hyperextensible skin and varied multiorgan system symptoms that vary by subtype
- Chronic pain is commonly reported in several subtypes
- Pain in the EDS population is typically treated with multidisciplinary management, although specific guidelines are lacking [1]

### Spinal Manipulative Therapy

- Spinal Manipulation is a commonly used technique that utilizes a high velocity low amplitude thrust to induce joint motion
- Spinal manipulation is a first line conservative treatment for neck pain and back pain
- However, hypermobility and possible instability in Ehlers Danlos Syndrome indicates a relative contraindication for cervical manipulation
- Previous case studies have shown MSK pain relief with chiropractic care in the EDS population without utilizing HVLA manipulation [2,3]
- This case explores how spine care providers that utilize manipulative techniques can manage patients with relative contraindications to HVLA by utilizing non-HVLA joint mobilization, soft tissue mobilization, education and exercise

## Case Description

### HPI

- 42-year-old female with Ehlers Danlos Syndrome (Hypermobile Subtype)
- Acute flare up of chronic neck and back pain following a motor vehicle collision
- Extensive history of management for pain including various medications, PT and injections which provided mild relief
- Cervical pain with radiation to bilateral 4<sup>th</sup> and 5<sup>th</sup> digits and thoracic pain
- Provocative factors include standing, twisting, bending, lying down, and sitting
- Palliative factors include massage, stretching, self-manipulation and heat

### Imaging/Examination

- CT Cervical and Thoracic spine negative for fracture or traumatic subluxation
- Painful and decreased cervical and thoracic ROM
- Neurological exam was unremarkable
- Maximal foraminal compression test reproduced axial neck pain without radiation. No neural tension was revealed with brachial plexus tension test. Cervical distraction and McKenzie end range loading was unremarkable
- Hypertonicity and tenderness in the bilateral cervical paraspinals, upper trapezius, levator scapulae, SCM, rhomboid and suboccipitals
- Facet joints C4-T8 were noted with joint dysfunction amongst hypermobility
- Examination was consistent with myofascial strain and sprain injuries from MVC in the setting of EDS

## Treatment - 2x/week for 4 weeks, 1x/week for 2 more weeks

**Reassurance:**  
Staying active is beneficial for neck and back pain

**Education:**  
Discontinue cervical self-manipulation

**Daily Home Exercises:**  
Emphasizing gentle stretching to tension, not pain. Strengthening exercises slow and controlled

**Manual Therapy:**  
IASTM, Manual Cervical Traction, Non-HVLA C/S Mobilization, T/S Manipulation

## Follow Up

- Neck disability index improved from 34 to 22 at week 4 reevaluation
- Back disability index improved from 46 to 26 at week 4 reevaluation
- ROM improvements in C-spine and T-spine
- Overall decreased muscle spasm and joint dysfunction
- Pt was approaching pre-accident status when she self-discharged from care at week 6
- No further interventional or conservative treatments since discharge

## Conclusions

This case demonstrates that chiropractic care is far more than just spinal manipulation. Patient education, therapeutic exercise, and soft tissue mobilization are evidence-based interventions used often by chiropractors, but especially when spinal manipulation is contraindicated. We propose that chiropractic care may be a beneficial conservative approach option for patients with Ehlers Danlos or Hypermobility Syndromes. Further research regarding the efficacy of chiropractic care for pain management in the hypermobile and EDS population is warranted.

## References

1. Chopra, P., Tinkle, B., Hamonet, C., Brock, I., Gompel, A., Bulbena, A., & Francomano, C. (2017). *Pain management in the Ehlers–Danlos syndromes*. *American Journal of Medical Genetics Part C: Seminars in Medical Genetics*, 175(2), 212–219. <https://doi.org/10.1002/ajmg.c.31554>
2. Lucente, M., & Walden, K. S. (2024). *Chiropractic treatment of a patient with Ehlers–Danlos syndrome: A case report*. *Journal of Contemporary Chiropractic*, 7, 196–201.
3. Morley, J. J., & Perrault, T. (2010, March). *Chiropractic management of Ehlers-Danlos syndrome: A case report*. *Journal of the American Chiropractic Association*, 47(3), 6–15.