

# **Barral Institute Case Study**

## **Neural Manipulation – Indigestion/Hip Pain**

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**Abstract:** A case study of a 30-year-old female with indigestion and hip pain that improved with neural manipulation treatments. Fascial restrictions and involvement of vagus nerve, lumbar plexus, obturator and femoral nerve appear to have been contributing to her symptoms and decreased functional status.

**Key words:** neural manipulation, visceral manipulation, kidney restrictions, psoas restrictions, Lumbar plexus, obturator nerve, femoral nerve, saphenous nerve, Vagus nerve, and PNF.

**Diagnosis:** Bilateral hip pain and indigestion in 30-year-old female      **Date:** 9/27/2017

**History:** This case is a 30-year-old female with 8-year history of bilateral hip pain. No specific onset for hip pain but did run hurdles in high school and college and had chronic ITB symptoms during her running seasons. She has worked retail the last 6 years which requires standing for long hours and aggravates her symptoms. Pain can vary from 0/10 to 8/10 at worst after side step band exercises. Indigestion started a few years ago, did go gluten free with mild reduction in symptoms. Past medical history includes esophageal erosion positive on endoscopy in 2015, belches a lot, childhood asthma, nut allergy, tibial plateau fracture when she was 8 years old. Medications include Zyrtec and multivitamins. Aggravating factors include prolonged standing more than 2-3 hours, side step band exercises, and she has cramps in her legs at night. Alleviated hips feel better with rest, changing positions at work, and heat or ice. Indigestion improved some after going gluten free. Test results X-ray of hips were negative, esophageal erosion positive on endoscopy in 2015.

**Objective Assessment:** revealed 30 y.o. female healthy body weight

Posture mild B protracted shoulder complex L>R, L shoulder elevated, mild FHP, B IR of LE L>R, foot position neutral, narrow base of support

General Listening: L thorax. Local listening: L esophagus

Manual Thermal: Projection over L mediastinum.

Pre Treatment pain 6/10.

Cervical AROM Flexion = 53° Ext=80° with hinge at C6, R Rotation=68° L=80°, SB R=40° L=25°.

Standing Functional UE NTT: R=40° and L=70°.

Standing Thoracic/Lumbar Rotation R=5% L=10%, trunk flexion=100% SB R=80% L=60%. Pelvic thorax shear R=0% L=20%

Extension Slump Dural tension test R=-35° L=-50°

Flexion Slump Dural tension test R=neg L=neg. Psoas R=3-/5 L=4-/5.

Hip PROM IR R=17° L=23°, ER full B, Flexion R=105°, L=110°.

Functional squat presents with decreased fold at R hip especially with weight shift R

MMT hip IR R=3+/5 L=3+/5 with pain, ER B=4/5, Knee extension B=5/5

Strength testing of core diagonal R=1-/5 L=2+/5.

Restrictions in L thorax and mediastinum, diaphragm, R endopelvic fascia, B LFCN.

**Procedure/Treatment:** Patient was seen for an initial evaluation and treatment session that lasted 90 minutes. After assessment portion treatment began in supine with techniques for release of L mediastinum, esophagus linked with stomach, L vagus nerve at esophagus at anterior neck linked

with gastric plexus. L diaphragm release linked with esophagus at hiatal region, and motility of esophagus and stomach. Then re-listened and GL went to R pelvis. Local listening R ovarian

ligament. Treatment included release of R ovarian ligament, R broad ligament, R utero---sacral ligament, LFCN just below inguinal ligament and linked with nerve buds at fascial rings in ITB. Given HEP of PNF prolonged holds (30---40seconds) for mass flexion for core stability, windshield wiper for hip IE/ER with use of breath for mobility.

**Post Treatment:** Cervical AROM Flexion = 80° Ext=90°, R Rotation=74°L=80°, SB R=45° L=35°.

Standing Functional UE NTT: R=180° and L=180°.

Standing Thoracic/Lumbar Rotation R=90% L=90%. Pelvic/thorax shear test R=40% L=20%.

Extension Slump Dural tension test R=---30° L=---15°

Hip PROM IR R=33° L=35°. Psoas R=3-/5 L=4-/5.

Functional squat presents with improved squat mechanics and fold at R hip crease

Strength testing of core diagonal R=4/5 L=2+/5

**Second visit:** Patient reported hips feeling better and no cramps at night since first visit.

Indigestion feels 50% better with less belching.

Pre Treatment assessment: General Listening: R abdomen posterior

Local listening: R Lumbar plexus with extended listening to R kidney

Manual Thermal: Projection over R kidney

Cervical AROM Ext=90° Flexion=76°. Hip IR R=13° L=19°

Standing Functional UE NTT: R=175° and L=170°

Standing Thoracic/Lumbar Rotation R=35% L=70%

Extension Slump Dural tension test R=---45° L=---35°

Strength testing of core diagonal R=1+/5 L=3+/5

Treatment: Release of fascial relationship of posterior kidney with psoas with use of breath, hip flexion, and heel slide as long lever to help with release. Then positioned B kidney's posterior lateral glide to enhance renal artery pulse to increase blood flow to kidney's for 45 seconds and same positional vascular treatment in SL with rotation to enhance release. B kidney motility after. Then release in supine to R then L lumbar plexus with hip extension and IR as it released with elongation in expansion phase. Then linked R obturator nerve at obturator foramen with L2/3, Fascial release to R femoral nerve and then linked saphenous nerve at superior medial knee with both femoral and obturator with elongation during expansion phase. Reviewed HEP and recommend continue.

**Post Treatment:** Feels overall 70% better. Cervical AROM Ext=NT Flexion=80°. Hip IR R=38°

L=40°. Standing Functional UE NTT: R=180° and L=180°.

Standing Thoracic/Lumbar Rotation R=95% L=100%.

Extension Slump Dural tension test R=---20° L=---15°

Strength testing of core diagonal R=4+/5 L=4/5.

**Discussion:** Findings indicate tension between kidneys and psoas fascia compressing lumbar plexus and possibly contributing to B hip pain due to referral patterns of lumbar plexus. Improper relationship of tension between kidneys and psoas may also be contributing to decreased core and hip stability. Fascial tension of left Vagus nerve along esophagus and stomach may be contributing to GI symptoms as symptoms decreased after visceral and neural techniques for these structures.

**Conclusion and Recommendations:** Further assessment of neural tension at vagus nerve causing indigestion and lumbar plexus causing hip pain needs to be further studied. The idea of treating just at the area of pain may cause true areas of restrictions and tension to be missed. These areas would not be found without the guide of general and local listening.

**Treating Therapist:** Veronika Campbell, PT, MPT, CSCS, NSC

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