Barral Institute Case Study
Neural Manipulation – Neck & Jaw Pain
Veronika Campbell, P.T., C.S.C., CNMP

Abstract: A case study of a 70-year-old female suffering with neck, jaw pain and disrupted taste after a fall backwards and hitting her head. Her symptoms resolved with treatment of cranial dura and nerve structures with neural manipulation.

Key words: Neural manipulation, taste disruption, TMJ pain, neck pain, cranial nerves and dura.

Diagnosis: Jaw, neck pain, and diminished taste after a fall **Date: 12/18/2017**

History: 70-year-old right hand dominant female
Past medical history includes migraines, IBS, GERD, tinnitus, Tubal ligation, R knee arthroscopy, tonsillectomy, bunionectomy, right lower leg vein ablation, left shoulder injury, history of intermittent neck and LBP.
Medications include Levocetirizi, Prempro, Flonase, magnesium, ibuprofen prn.
Symptoms began year and half ago after falling flat on her back and hitting her head. She had a headache for a few weeks and noticed her taste was disrupted. She also had a jaw click and pain with chewing and her left shoulder and neck were sore. She had 12 visits with another PT that treated her neck and shoulder and she felt much improvement but jaw and taste were still a problem. Pain varies from 2 to 10 at its worst. Aggravating factors include prolonged sitting, sleeping, house hold chores, chewing. Taste is diminished or changed, especially cucumber tasted bitter. Alleviated by heat, stretches, ibuprofen and previous PT
Test results CT, MRI, and X-ray all negative.

Objective Assessment:
General Listening: L neck and cranium
Local listening: L tentorium
Manual Thermal: L cranium
Pre Treatment pain 3/10.
Cervical AROM flexion =55 ° Ext=45° SB R=33° L= 17° Rotation R=58°L=43° .
Standing Functional UE NTT: R=45° and L=55°.
Standing Thoracic/Lumbar Rotation R=20% L=10%.
Extension Slump Dural tension test R=---25° L=---40°
Restrictions in L cranium, jaw, floor of mouth, suboccipitals and neck fascia.
Palpable click with end range opening on left TMJ.

Procedure/Treatment: Patient was seen for an initial evaluation and treatment

session that lasted 75 minutes and two follow up treatments that lasted 60 minutes each. Treatment sessions included neural techniques for left tentorium,

left falx, left trigeminal ganglion, intraoral for left mandibular branches of trigeminal nerve, , floor of mouth fascia, left facial nerve intra---osseous technique, auriculotemporal nerve, B ear pulls for facial and trigeminal nerve, and lingual nerve, jugular foramen link with glossopharyngeal nerve at tongue, superior orbital fissure B and balanced CSR.
Given HEP of self ear pulls and self skin rolling over left face and jaw.

Reassessment post treatment sessions:
Post Treatment pain 0/10.
Cervical AROM flexion =75 ° Ext=72° SB R=35° L=39° Rotation R=72°L=68°.
Standing Functional UE NTT: R=170° and L=160°.
Standing Thoracic/Lumbar Rotation R=70% L=50%.
Extension Slump Dural tension test R=---20° L=---20°
Improved tissue mobility in cranium and neck. Taste feels 85% better and cucumbers taste normal again.

Discussion: Findings indicate possible trauma related taste disturbance in which neural tension involvement in trigeminal, facial, glossopharyngeal nerves was contributing. The trauma to the posterior head affecting posterior dura which shares innervation with trigeminal nerve may have caused tension in the cranial dura and neural system. The relationship of the pterygopalatine ganglion with the facial and trigeminal nerves via chorde tempani to lingual nerve may be why her taste was affected. Tension here appeared to be also what contributed to her neck pain and jaw pain as well.

Conclusion and Recommendations: Further assessment of neural tension in cranial dura and cranial nerves after trauma to the head leading to pain and disrupted taste needs to be further studied.

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

References:

- Barral Institute Neural Manipulation Course Workbooks from NM1--NM4, 2006--2016
- Barral & Croibier. *Manual Therapy for the Cranial Nerves.* Palm Beach Gardens FL: Barral Productions; 2013
- Barral & Croibier. *Manual Therapy for the Peripheral Nerves.* Palm Beach Gardens FL: Barral Productions; 2013
- Barral. *The Thorax.* Seattle WA: Eastland Press Inc; 1991
- Barral & Croibier. *Trauma an Osteopathic Approach.* Seattle WA: Eastland Press Inc; 1999
- Barral. *Manual Thermal Evaluation.*