Osteopathic Approach to Treating Myofascial Pain Related To Neck Pain and Headaches

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Excellent Resources:

- Intro, Definition,
- Causes of MFP
- Diagnosis of MFP
  - Neck ROM Assessment
- Standard treatment of MFP
  - OMT: inactivate TrP
  - Manual stretch (ME) of TrP
  - Self-stretch for common S.D.
  - OMT: Key S.D.
Importance of diagnosing and treating Myofascial Trigger Points (MTrPs)

I. MFP is extremely common and often patients are undiagnosed for years
II. MFP is often confused with other conditions
III. MTrPs are a significant source of disability and pain
IV. Treatments are generally effective

*Good to be aware of, willing to look for, and comfortable with the diagnosis and treatment of MTrPs
DEFINITION:

• Myofascial Pain (MFP) is pain caused by an area of hypersensitivity in a muscle and its fascia, i.e., a **Myofascial Trigger Point (TrP)**

• The myofascial TrP (MTrP) is associated with a taut band in the muscle, which refers pain to a distant location when compressed, stretched, or even at rest.
Central (mid-belly) trigger point (CTrP)
Active Myofascial TrP

- Worst MTrPs cause **pain and tenderness** at **rest or** with motion that stretches or loads the muscle

- Cause **shortening** of the muscle, as well as **fatigue** and decreased strength (**weakness**)!

- Pressure on an **active MTrP reproduces** some of the patient’s pain complaint and is **recognized** by the patient as being some or all of their pain

- **Latent TrP**: ‘knot’ in muscle, but only painful only when palpated / squeezed.
Prefrontal Pause:

Take a minute, turn to your neighbor and discuss:

Q: Trigger points in which two muscles very commonly cause referred pain to the Neck and Head?

a) Anterior Scalenes and Infraspinatus
b) Levator Scapula and Supraspinatus
c) Supraspinatus and Splenius Capitus
d) Upper Trapezius and Sternocleidomastoid
e) Upper Trapezius and Serratus Posterior Superior
WORKSHOP ROADMAP

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Pathogenic Factors (CAUSES) of Myofascial Trigger Points

- Acute overload
- Overwork - Fatigue (Including postural stress)
- Chilling of the muscle
- Gross Trauma
- Emotional distress
- Joint or nerve damage
- Visceral disturbance
- Other Trigger Points

Key point: it can be difficult to identify the pathologic factor that led to the MTrP.
Chart outlining the natural course of Myofascial pain caused by Trigger Points

Pathogenic Factors

STRESS/OVERLOAD

Taut Band

Latent TrPs

Active MTrPs

Perpetuating Factors

Additional TrPs & Chronicity

Spontaneous Recovery

Persistence without progression
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MFP: Disease recognition

• **MTrPs:**
  – Cause **pain** & **tenderness**, even **weakness**
  – **Active MTrP:** Can be recognized by a symptom pattern that correlates with the pain distribution patterns delineated by Travel and Simons
    • Patient can draw diagram or use description or hands to demonstrate the location of pain

Patient’s pain diagram drawing
Referral Pattern of Selected Muscles

- **Sternocleidomastoid (SCM) MTrP**
  - Can cause:
    - Frontal & Occipital headaches
    - TMJ pain
  - AND
    - Dizziness
    - Nausea
    - Blurry vision

- **Upper trapezius MTrP:**
  - Common cause of ‘tension headache’
  - Most common TrP found
# MTrP: Critical Clinical Features

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<table>
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<tbody>
<tr>
<td><strong>1.</strong></td>
<td>Palpable Band or Taut Band</td>
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<td><strong>2.</strong></td>
<td>Spot Tenderness</td>
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<td><strong>3.</strong></td>
<td>a. Elicited Referred Pain and/or Tenderness -AND/OR-</td>
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<td>b. Restricted Range of Motion</td>
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<td><strong>4.</strong></td>
<td>Pain recognition</td>
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MTrP: Critical Clinical Features

1. Palpable Band or ‘Taut Band’

- A cord like band of fibers is present in the involved muscle

- This can be difficult to identify when there are overlying muscles or thick subcutaneous tissue

Flat palpation

Pincer grip
MTrP: Critical Clinical Features

2. Spot Tenderness

- A very tender small spot which is found in a Taut band

- The sensitivity of this spot (TrPs) can be increased by increasing the tension on the muscle fibers of the taut band
MTrP: Critical Clinical Features

3a. Elicited Referred Pain and/or Tenderness

- An **Active TrP** refers pain in a pattern characteristic of that muscle
  - Usually to a site distant to the TrP

- **Latent TrPs** also refer pain on pressure but usually require more pressure to do so
Helpful clinic resources:
MTrP: Critical Clinical Features

3b. Restricted Range of Motion

- An Active trigger point (TrP) may cause restricted range of motion of the involved muscle when it is put into stretch
  
  • Example: Inability to fully turn head to the right with a trigger point in the right upper trapezius
MTrP: Critical Clinical Features

4. Pain Recognition

- Digital pressure on, or needling of the tender spot induces / reproduces some of the patient’s pain complaint and is recognized by the patient as being some or all of his or her pain
- **This finding by definition identifies an Active trigger point**
- This replication of the patient’s pain may require sustained pressure (5 - 60 seconds) on the TrP
Class Participation: MFP Diagnostic

1. Turn to your neighbor. *With permission*, palpate the upper trapezius along the mid-belly. With a pincer grasp locate the region of maximal tension/taut band/knot.

2. While maintaining attention on your partner (watch their reaction) *gently squeeze* on the knot for 5-10 seconds, (if they are grimacing, you can back-off).

3. Ask if there was a pain referral? (lateral neck around ear to temple region or angle of the jaw).

4. *Now partners switch and repeat steps 1-3.*
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ROM: CERVICAL SPINE

Active ROM:
• Looking for:
  • Restricted ROM
  • Pain (where?)
NECK ROM INTERPRETATION

- **Example: Neck pain, esp. R side**
  - **SIDEBENDING** to left caused pain in the right supraclavicular region.
    - Which muscles could be involved?
  - Now check **ROTATION**.
    - Symptoms get worse/are more restricted in rotation to the right.
    - Where is it painful/restricted?
    - What muscles could be involved?
      - *Upper Trap* and *SCM* tight when turning **toward** them;
      - *Levator* tight when turning **away**
  - Can also have patient point to where it feels tight/painful.
    - Does this help narrow further?


Upper Trap or SCM pattern of restriction

Levator scap pattern of restriction
**ROM: CERVICAL SPINE**

**Step 1. Sidebend:** is there a restriction?
- *If yes, proceed to step 2.*

**Step 2:** ASK ‘Where it is tight?’
If they are restricted in one direction and feel it is tight on the opposite side it is a **musculotendinous pattern**
- *Ex: sidebending L, tight on R*

**Step 3.** Rotate: is there a restriction?

**Step 4:** Ask ‘Where do you feel the restriction/tightness?’

**Active ROM:** Looking for:
- Restricted ROM?
- Pain/Pull (where?)
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Specific Treatment of *Active TrPs*

- **Active MTrPs** can be treated fully with OMT & stretching.
- They may need the following additional treatments, which can be exceptionally helpful:
  - Ischemic Compression
  - Spray and Stretch
  - Needling of the TrP with lidocaine infiltration
Classic Treatments of Active MTrP:

- Ischemic Compression
- TrP Injection
- Spray… & Stretch

Example:
Upper Trap
Myofascial Trigger Points

What if they do not have all 4 criteria?

1. Palpable Band or Taut Band
2. Spot Tenderness
3. a. Elicited Referred Pain and/or Tenderness -AND/OR-
   b. Restricted Range of Motion
4. Pain recognition

- Diagnosis: Latent Myofascial TrP
- How do you treat that?
Specific Treatment of ANY (Latent or Active) Myofascial TrPs

- **OMT:**
  - **Inactivate MTrP:**
    - Indirect: Counterstrain, FPR, MFR, etc.
  - **Manually stretch muscle with TrP:**
    - Muscle Energy
  - **OMT:** for other **Relevant S.D.**
    - e.g. segmental S.D.s (innervation),
    - bony attachments (origin/insertion)
    - joints spanned/moved by muscle

- **Self Stretch:** *(later...)*
OMT APPROACH

Where do you begin?
What do you treat?
OMT FOR MTrP WORKSHOP

- OMT: inactivate TrP
- Manual stretch TrP
- Self-stretch for TrP
- OMT: Key S.D.

I’m ready for you MTrPs!
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Harmon Myers, D.O.

• “The most striking phenomenon to me is that clinically, the Counterstrain method of treatment – in the great majority of cases – is successful in relieving the pain when applied to myofascial Tender Points.”
  – Harmon Myers, 2005

• Myers used Jones’ Counterstrain to treat myofascial pain, and used the myofascial patterns of pain to determine what to treat.
Inactivate the TrP: *Counterstrain*

- **Upper Trap CS**
- **SCM CS**
- **Levator Scap CS**
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Manual Stretch: KEY UE Muscles

- Upper Trap S/CS
- Levator Scap S/CS
- SCM S/CS

- Upper Trap Stretch
- Levator Scap Stretch
- SCM stretch
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Self Stretches:

Ex: Stretching Of The **Upper Trapezius**

(Maximumal isolate and **gently** stretch muscle)

1. Same side hand holds-on to chair
2. Lean-away from tight muscle – this locks shoulder girdle down to initiate stretch
3. With opposite hand use fingertip pressure on top of head to bring ear away from side being stretched
4. Slightly flex head forward then turn face back to side being stretched
5. Hold 30 seconds
Self Stretches:

- **Upper Trap**
- **Levator Scap**
- **SCM**
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• Janet Travel M.D. believed that trigger points are much better released when treating related S.D.
  – e.g. Psoas or QL trigger points and the importance of treating lumbar segmental S.D. (FRS, ERS, etc.)
OSTEOPATHIC STRUCTURAL EXAM:

- OA, AA
- Lower cervicals
- Thoracic inlet
- Upper Thoracics, upper rib cage
- Thoracic or Lumbar Scoliosis
- Sacrum
- Leg-length discrepancy
- Fascial restrictions
- Muscle tightness/imbalance
  – (next slide)

C-spine compensates for SD in other areas of the body with the goal of keeping the eyes level
OMT: CRITICAL S.D.’S FOR ANY NECK CONDITION

- Occipito Atlanto (OA)
- Atlanto Axial (AA)
- Lower Cervicals
- Upper Thoracics or Rib S.D.s
- Thoracic Inlet Rotation
- Thoracic Inlet Sidebending
CONCLUSION

- Myofascial Pain Syndrome (MFPS) is a significant source of disability and pain in many patients
- It is often confused with other conditions
- It is extremely common and can present itself undiagnosed for years
- *With OMT we can resolve some of the common causes, the and the S.D.s related to MTrPs.*
Questions?

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