Diagnostic Classification and Treatment Implications by Physical Therapists for Patients with Headaches and/or Temporomandibular Disorders

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Disclosure

No relevant financial relationship exists

Session Learning Objectives

* Provide a valid approach for PTs in classifying and treating patients presenting with TMD or other craniofacial disorders including headaches.
* Detail best practices for physical therapy examination and plans of care for patients with TMD and/or other craniofacial disorders, based on best evidence and interprofessional standards.
Session Learning Objectives

• Describe indications and precautions, based on the examination and screening, for integrating an interprofessional approach for diagnoses or treatment classifications suspected to be outside the scope of typical PT practice, including screening for primary headache, cranial nerve disorders, and behavioral health issues.

• Provide an overview of the functional anatomy and pathomechanics as they pertain to the primary disorder classifications associated with TMD and craniofacial pain.

Session Learning Objectives

• Discuss the clinical indications for recommending additional imaging studies of the TMJ region to assist with differential diagnosis and plan of care.

• Describe the roles of the members of the interprofessional team in managing the care of the patient with chronic TM and craniofacial disorders including headaches.

• Describe the pathomechanics, and best practices for classification and interventions for cervicogenic headaches.

Outline

• PT and the interprofessional team
  * How to find an OFP specialist
  * Current classification scheme
  * Anatomy of the Craniovertebral region
  * Differential diagnosis
  * PT intervention algorithm
TMD Classifications
APTA Combined Sections Meeting, Anaheim CA, 2016

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Introduction

• TMJ ≠ TMD
• ADA accepted TMD dx in 1983
• ≈ 35% of US population has TMD
  • 5-10% seek medical assistance
• 20-40 y/o females most common
  • Genetics, hormonal, and occupational

Team Approach

• Management of TMD may involve multiple players
  • PT
  • Dentist
  • Psychologist/Psychiatrist/BPM
  • Others?
Team Players: PT

- Most common TMD complaints seen in PT
  - Muscle and joint involvement– both cervical and TMJ
  - Pain and/or ROM
  - Psychosocial and behavioral factors contributing to dysfunction
  - Parafunction, stress, posture
- PT = experts in neuromuscular dysfunction
- This can be extrapolated to TMJ region

Team Players: Dentistry

- Recruit OFP dentist if still present after 1 month
- Parafunctional activity
- Joint inflammation and/or trigger points
- Muscle pain

How Do I Find an Expert?

- Not all dentists are experts in the management of TMD
  - ≈ 14% of general dentists and 22% of oral surgeons treat TMD
  - TMD comprises <5% of their practices
  - Patients with TMD see average of 5.3 clinicians and pain 4.2 years before seeing a specialist
How Do I Find an Expert?

- Credentials: Dental Diplomate
- Orofacial pain specialists
- 5 years of OFP experience
- 400 hours of CEUs
- Board exam
- www.aasp.org

How Do I Find an Expert?

- Credentials: PT-CCTT
- Experience: 5 years at PT
  - 2000 hours in OFP, HA, neck pain in 5-10 years
  - 100 CEUs
- 2 letters of reference
- Dentist/oral surgeon and PT
- Board exam
- www.ptbcct.org

Team Players: BPM

- TMD is associated with psychosocial issues
- Patients with chronic TMD are physiologically over-reactive → leads to substantial psychosocial stressors vs. those without TMD
Classification

- DC/TMD originally developed by Dworkin and LeResche in 1992
- Based on symptoms – termed RDC/TMD
- Modified in 2010 by inter-professional consortium
- Based on ICF model – termed DC/TMD

DC/TMD

- Axis I – Physical Exam
  - Group I – Masticatory muscle disorders (M62.89)
  - Group II – Disc displacement (M26.63)
  - Group III – Joint dysfunction (M26.62)
  - If using algorithm, excellent inter-examiner reliability for any muscle disorder, any joint pain, or any disc disorder

DC/TMD

- Axis II – Psycho-social
  - Shift toward Axis II dominance as time passes
  - Ask Anne about Okeson’s chart that relates time with more psychosocial issues
Diagnostic Classification...Headaches and/or Temporomandibular Disorders

Table I. Diagnostic criteria of TMD among TMD patients

<table>
<thead>
<tr>
<th>Group</th>
<th>Axis I</th>
<th>Axis II</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Muscle</td>
<td>Osteoarthrosis</td>
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<tr>
<td>II</td>
<td>Joint</td>
<td>Arthralgia</td>
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References

References


Anatomy of the Temporomandibular Joint

Pamela D. Ritzline, PT, EdD
Chair, Division of Health Sciences
Professor, Physical Therapy
Walsh University

APTA Combined Sections Meeting, Anaheim, 2016

Temporomandibular Joint Anatomy

Bones of the Skull

<table>
<thead>
<tr>
<th>Cranial Bones</th>
<th>Quantity</th>
<th>Facial Bones</th>
<th>Quantity</th>
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</thead>
<tbody>
<tr>
<td>Ethmoid Bone</td>
<td>1</td>
<td>Ethmoid Glands</td>
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<tr>
<td>Frontal Bone</td>
<td>1</td>
<td>Lateral Bones</td>
<td>2</td>
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<td>Occipital Bone</td>
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<td>Mandible</td>
<td>1</td>
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<tr>
<td>Parietal Bone</td>
<td>2</td>
<td>Maxilla</td>
<td>2</td>
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<tr>
<td>Sphenoid Bone</td>
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<td>Nasal Bones</td>
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<tr>
<td>Temporal Bone</td>
<td>2</td>
<td>Vomer</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Zygomatic Bones</td>
<td>2</td>
</tr>
</tbody>
</table>

Osteology: Maxilla, Mandible, Temporal bone, Dentition

TMJ Anatomy – Bony


Joint Surfaces

- Concave mandibular fossa of the temporal bone
- Convex articular eminence of the temporal bone
- Convex condyle of the mandible
- Fibrocartilage


TMJ Anatomy – Disc/Meniscus


TMJ Anatomy – Ligaments/Capsule

TMJ Anatomy – Muscles


TMJ Associated Structures

- Bony
  - Head
  - Cervical spine
  - Hyoid bone
- Teeth
- Muscles
- Vascular structures
- Neurological structures

TMJ Associated Bony Structures

- Head
- Cervical spine
- Hyoid bone
TMJ Associated Bony Structures


TMJ Associated Structures


TM Joint Associated Muscles

TM Joint Associated Muscles³

Suboccipital muscles


TM Joint Associated Muscles³


TMJ Associated Neurovascular
Differential Diagnosis

- Primary headache
- Secondary headache
- Cranial & peripheral neuralgias
- Central nervous system disorders

TM Structures as Source

- Key questions
  - Have you had pain or stiffness in the face, jaw, temple, front of ear, in the ear in the last month?
  - Are the symptoms altered by any of the following:
    - Functional activities – chewing, talking, singing, yawning, kissing, moving the jaw
    - Parafunctional activities – clenching, grinding, bruxing
    - Have you ever had your jaw lock or catch?

Differential Diagnosis

- Screen for Red Flags – SNOOP
  - Systemic – fever, chills, night sweats
  - Neurologic – abnormal neurologic findings
  - Onset sudden – H/A peaks within 1 minute
  - Onset after age 50
  - Pattern change
    - Increase in frequency
    - Associated with Valsalva
    - Aggravated by postures that change cranial or eye pressure
    - Any of above = immediate medical attention


Primary Headache

- IHS – neurological or vascular in origin
- Migraine
- Tension type
- Trigeminal autonomic cephalalgia
  - Cluster
- Other primary headache disorders

Migraine

- Common disabling primary H/A
- Disrupts life, daily function
- 3rd most prevalent disorder worldwide
- 7th specific cause of disability worldwide
- Women > men
- Major subtypes
  - Migraine without aura
  - Migraine with aura

Migraine Diagnosis

- HA: Unilateral, may shift
- Lasts 4-72 hours
- At least 2
  - Unilateral
  - Moderate to severe intensity
  - Increased with physical activity (avoidance of.....)
  - Pulsating quality
- At least 1
  - Nausea, vomiting
  - Photophobia, phonophobia
Primary Headache

- Migraine
- Neurological, with possible vascular component
- Cortical Spreading Depression
  - Self propagating progression of depolarization of both neuronal and glial cells
  - Previous theory: vasodilation (aura) followed by vasoconstriction (HA)

Cortical Spreading Depression

- Depolarization begins in occipital lobe
- Band is depolarization, causing depression of cortical activity and increased CBF
- Blue is reduced CBF
- Visual aura in occipital
- Sensory changes in extremities as CSD reaches post central gyrus (SS cortex)
  - 6: usually stops at central gyrus
  - 7: full scale attack
  - 8: brain perfusion returns to normal

Neuronal changes

- Cortical spreading depression definitely part of migraine with aura
- Still debated in terms of migraine without aura
  - Neurobiology is still the culprit
  - Brain stem blood flow reduced in migraine without aura
Triggers

- Food/Drink
- Musculoskeletal
  - Cervical “tension”
- Stress
- Menstrual cycle
- Medication
  - Overuse
  - Withdrawal


TENSION TYPE Headache


Tension Type Headache

- Very common
- Typically bilateral
- May greatly decrease quality of life if chronic
- Exact mechanisms unknown
  - Infrequent – peripheral pain mechanisms
  - Frequent – central pain mechanisms

### Tension Type Headache Characteristics
- At least 10 episodes of H/A < 1 day/month
- Lasts from 30 minutes to 7 days
- At least 2 of the following
  - Bilateral location
  - Pressing or tightening (not pulsating) quality
  - Mild or moderate intensity
  - Routine physical activity does NOT aggravate
- Also:
  - No nausea or vomiting
  - No more than one of photophobia or phonophobia

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### Trigeminal Autonomic Cephalalgia (TAC)
- Cluster headache
- Prominent cranial parasympathetic autonomic features
- Paroxysmal hemicrania
- Men 3x more than women
- Activation in posterior hypothalamic gray matter

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### TAC Clinical Features
- Severe lateralized/ipsilateral pain
- Unilateral orbital, supraorbital, or temporal H/A - at least 5 episodes
- Pain can be debilitating, excruciating
- Lasts 15-180 minutes
- Episodes - one every other day, up to 8 a day, during active "cluster" phase - active phase lasting weeks or months

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TAC Diagnosis

- At least 1 of the following ipsilateral to H/A
  - Conjunctival lacrimation
  - Rhinorrhea (nasal congestion)
  - Eyelid edema
  - Facial swelling
  - Facial flushing
  - Ear fullness
  - Meiosis/ptosis

IHS Criteria for Trigeminal Neuralgia

- Paroxysmal attacks of facial or frontal plane
  - Lasts few seconds to 2 minutes
- Pain – at least 4 of the following
  - Distribution along 1 or more divisions of trigeminal nerve
  - Sudden, intense sharp, superficial, stabbing, or burning
  - Severe intensity
  - Precipitation from trigger areas
  - Eating, talking, washing the face, cleaning teeth
- No neurological deficit
- Attacks stereotyped in individual
- Exclusion of other causes of facial pain

Secondary Headache

- Cardiovascular origin – angina, MI, HTN
- Eyes
- Ears
- Sinuses
- Dental structures
- Medication complications
- Neurologic types of pain
- Cervical spine disorders
Secondary Headache

- Red Flags
  - Sudden onset of severe headache
  - Weakness
  - Slurred speech
  - Angina
  - Myocardial infarction
  - Hypertension


Cranial & Peripheral Neuralgias

- Herpes zoster, post herpetic neuralgia
- Optic neuritis
- Trigeminal neuralgia
- Space occupying tumor
- Red Flags
  - SNOOP H/A criteria


Central Nervous System Disorders

- Red Flags
  - Weakness
  - Loss of balance
  - Confusion

References

Central Sensitization

- “….abnormal and intense enhancement of pain by mechanisms of the central nervous system…” ¹
  - Allodynia: pain response to non-painful stimulus
  - Hyperalgesia: excessive sensitivity to painful stimulus
  - Expansion of receptive field: Pain in much larger area of body
  - Prolonged pain after removal of stimulus

¹ References: 1.
Pain duration associated with central sensitization

Central sensitization inventory

About the pain: neurophysiological, biomechanical, fear of movement
Establish expectation: Improvement and empowerment

Education: Emotional/Affective, Cognitive/Behavioral

Stress management: Breathing, meditation, recognition of triggers
Behavior: Parafunction, ergonomics, physical activity pacing, sleep hygiene
Central Sensitization Exercise

- Relaxation Exercises
  - Reduction of parafunction
- Postural Exercises
- Breathing Exercises
- Aerobic Exercise
- Strengthening Exercise
  - Upper quarter
- Graded physical activity

Peripheral Nociceptive Inputs

Kraus, 2014
TMJ: Mechanisms of Injury

Macrotrauma

Microtrauma

TMJ Pathology: Masticatory Muscle Disorder

• 427/511 referrals of people with TMD (Kraus)
• Often coexists with joint dysfunction

Masticatory Muscle Disorder

• Overuse
• Strain
• Muscle Guarding
  – Muscle adapting to pain
• Trigger points
• Tendinitis
Masticatory Muscle Disorder

- Associated with cervical spine disorder
- Muscle nociceptors readily sensitize CNS
  - Acute to chronic
- Altered motor control patterns

Masticatory Muscle Disorder Examination, Key elements

- History
  - Pain with jaw function
  - Parafunction
  - AM pain
- Function/Mobility
  - Pain at end range motion
  - Limited opening (possible)
  - Resisted protrusion (LP)
- PALPATION
  - Muscle and tendons
    - Temporals
    - Masseter
  - Cervical spine

Temporals
Referral

Medial
Ptterygoid

Lateral
Ptterygoid

Artwork by Tom Dolan, University of Kentucky
About the pain: neurophysiological, biomechanical, fear of movement

Establish expectation: Improvement and empowerment

Masticatory Muscle Disorder Education

Stress management: Breathing, meditation

Behavior: Parafuction, diet (soft if needed), ergonomics, sleep hygiene

Resisted protrusion to activate lateral pterygoid

Masseter Referral
MMD: Education

- Physical self regulation vs splint therapy\(^5\)
  - PSR: “postural relaxation, breathing, proprioceptive awareness”
  - No diff: MMO and pain reduction
  - 26 week follow up: PSR superior
- Education + intraoral manual therapy+ exercise\(^6\)
  - Superior to manual therapy alone
  - Superior to no treatment
- Used as control group in several studies\(^7\) demonstrating effectiveness of education alone

MMD: Manual Therapy

Joint, Soft Tissue Mobilization

- MT improved mouth opening and reduced pain\(^8\)
  - Botox had slightly better results in ROM at 3 mths, MT slightly better in pain outcomes.
- MT with ex reduced pain and improved motion\(^9\)
- Research is limited and mixed

MMD: Upper Cervical Segmental Mobilization

- Reduction in pain (intensity and sensitivity via PPT) in masseter and temporalis (RCT)\(^10\)
- Research suggests the relationship is reciprocal
  - Treating TMD helps reduce pain and increase ROM in upper cervical\(^11\)
Masticatory Muscle Disorder:
Plan of Care: Exercise

- Rocabado "6x6" \(^{12}\)
  - AROM, tongue to roof
    - Rhythmic stab to mandible
    - Cervical axial extension, upper fix
      - Add slight upper cervical distraction with flexion
      - "Shoulders back and down"

- Kraus \(^{13}\)
  - Rest position of tongue
  - Nasal diaphragmatic breathing
  - "Teeth apart"
  - Wriggling mandible
  - AROM, guide mandible
  - Touch and bite (AROM lateral excursion and protrusion)
  - Isometrics

Exercise

- Overview of 8 studies examining effect of various JAW exercise programs on people with MMD \(^{8}\)
  - Results were mixed
  - Exercise vs education: non significant effect on maximal mouth opening (MMO)
  - Exercise vs splint: significant improvement in MMO

Exercise: Rationale

- Mobility, joint nutrition
  - AROM
  - Touch and bite (Kraus)
  - Self stretch

- Muscle relaxation
  - Tongue position
  - Teeth apart and breathe (nasal)
  - Wriggling mandible (Kraus)

- Stabilization
  - Isometrics (mandible)

- Proprioceptive
  - AROM guiding mandible
  - Touch and bite

- Postural retraining
- Cervical exercises as indicated
- Aerobic Exercise (?)
Postural Exercise

- Addressing cervical and thoracic
  - Stretch, strengthen, healthy ergonomics
- Pooled 2 studies
  - Improved maximum painfree opening
  - Reduced pain

Aerobic exercise

- Evidence of positive effect in people with central sensitization
- Reduces pain intensity, duration, and frequency in people with migraine (Naze and Harrison, 2015, unpublished)
- Reduces pain intensity in people with fibromyalgia

Masticatory Muscle Disorder: Dry Needling

- Lateral pterygoid
  - RCT: Reduced pain, increased opening
- Similar effectiveness (one injection only, and no other interventions) to lidocaine injections in people with masticatory mm trigger points, over 30 days (initially lidocaine reduced VAS more)
- Upper quarter trigger points
  - DN more effective than sham or placebo
  - DN as effective as lidocaine injections
Masticatory Muscle Disorders: Physical Agents

- Low level laser similar to splint therapy in pressure pain threshold (ppt) of masticatory muscle (n=30) ¹⁸
  - Patients mixed with joint and/or muscle disorders
- TNS and iontophoresis: mixed evidence ¹⁹
  - No studies on temporalis tendonitis
- Ultrasound: RCT: reduced pain and ppt in cervical myofascial pain (phono no better) ²⁰
  - Always consider rationale in using physical agents as adjunct

MMD: Interprofessional Referral

- Dentistry
  - Splint
  - Medications
  - Injections
- Behavioral Health
  - Access in interprofessional orofacial pain clinic
  - Red flags: Axis II mental health diagnoses
  - Red flags: other medical practitioners as needed
  - Primary headache
  - Neuropathic pain (e.g. trigeminal neuralgia)
  - HA due to secondary causes outside PT scope
  - Orofacial pain dental expert if splint or medications should be considered, or dental problems apparent

Masticatory Muscle Disorders Summary

- Education (pain, habits, breathing, sleep, diet)
- Treat the cervical spine if needed
- Manual therapy
  - Joint mobilization
  - Soft tissue mobilization
- Dry needling
- Iontophoresis (e.g. temporalis tendonitis)
- Therapeutic exercise:
  - Postural exercises
  - Mandibular exercises with rationale
    - Neuromuscular, proprioception, ROM, relaxation
- Interprofessional referral if indicated
Physical Therapy Scope

<table>
<thead>
<tr>
<th>Refer Out</th>
<th>Primary HA</th>
<th>Secondary HA</th>
<th>Cranial Neuralgias</th>
<th>CNS lesion</th>
<th>Major psychological disorder</th>
<th>Masticatory Muscle Disorder</th>
<th>TM Joint Disorder</th>
<th>Cervicogenic Headache, Cervical Disorders</th>
<th>Contributing Factors</th>
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<tbody>
<tr>
<td></td>
<td>Masseter</td>
<td>Temporalis</td>
<td>Pterygoids</td>
<td>Tendon</td>
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<td>Disc Disorder (DDWR, DDWOR)</td>
<td>Segmental Dysfunction</td>
<td>Muscle pain referral (e.g. trigger point)</td>
<td>Central Sensitization</td>
</tr>
</tbody>
</table>

Contributing Factors
- Sympathetic nervous system overactivation

Disc Disorders: Disc Displacement with Reduction (DDWR)

Exam: “Clicking”
- Used to discern anterior disc displacement
- Sn=.82-.86, Sp=.19-.24
- High Sn; SNNOUT
  - Likely not to have DDWR if no click

Okeson et al., 2014
Disc Displacement Without Reduction
DDWOR: Results in an arthrokinematic block

Temporomandibular Disorders
• Address pain
• Address dysfunction

DDWR, DDWOR
What hurts?
Retrodiscitis, synovitis, capsulitis?
Inflammation
Joint Structures

- DDWR
- Pain associated with clicking (?)
- ROM likely to be normal

- DDWOR
- No clicking (possible crepitus; previous history of clicking)
- ROM limitations possible
  - Opening with deflection
  - Reduced contralateral lateral excursion

Inflammation
Joint Structures

- Preauricular Palpation: Pain (Sn=.92; Sp=.21)
- Special tests: Joint compression

About the pain: neurophysiological, biomechanical, fear of movement

Establish expectation: Improvement and empowerment

Education

Joint, Inflammation

Stress management: Breathing, meditation

Behavior: Reduce parafunction, diet (soft if needed), ergonomics, sleep hygiene

About the pain: neurophysiological, biomechanical, fear of movement

Establish expectation: Improvement and empowerment

Education

Joint, Inflammation

Stress management: Breathing, meditation

Behavior: Reduce parafunction, diet (soft if needed), ergonomics, sleep hygiene
Inflammation
Joint Structures

- Address masticatory muscle disorder
- Joint mobilization
  - Low grade if painful
  - Higher grade once pain subsides, if indicated
- Exercise
  - Relaxation ex
    - AROM in painfree range
    - Kraus “wiggle”
  - Proprioceptive exercises: guiding mandible
  - Isometric: joint stability
- Address cervical as needed

Physical agents to address inflammation/joint pain

- Iontophoresis
  - Improved pain and ROM in children with JRA \(^{24}\)
  - Improved ROM, but not pain \(^{25}\)
- Laser
  - 2 reviews, 2011 \(^{26,27}\)
- More research is still needed
### DDWOR: Mobility

- Exercise plus manual therapy
  - Reduced pain and increased ROM (compared to splint therapy, medications, self care)

- Conservative care (e.g. joint mobilization and exercise) should be the first line with TM joint dysfunction compared to arthrocentesis or arthroscopy

### DDWOR: Interprofessional Referral

- Dentistry, Medicine
  - Meds: anti-inflammatories, injections

- Dentistry (specialists in OFP): splint to reposition mandible anteriorly (note: this is not conservative as it alters bite)

- Oral surgery
  - Arthrocentesis
  - Arthroscopy

### TMJ Arthralgia: Hypomobility

Capsular fibrosis (prolonged immobilization)

- Pain
- Function: Capsular pattern
  - Limited opening with ipsilateral deflection
  - Reduced contralateral lateral excursion
  - Limited protrusion with ipsilateral deflection
  - Special tests (joint compression) for joint inflammation
  - Differentiate from masticatory muscle disorders
TMJ Arthralgia: Hypermobility

- Examination:
  - Mechanisms: Trauma, open lock, steep short eminence
  - Special tests for joint inflammation
  - Masticatory muscle disorder
- Interventions
  - Treat masticatory muscle disorder
  - Treat joint inflammation if present
  - Education: reducing mouth opening during function

Hypomobility

- Modalities: anti-inflammatory, or thermal
- Joint mobilizations
- Therapeutic exercise
- Address masticatory muscle disorders

Hypermobility

- Modalities: anti-inflammatory
- Education to avoid end range
- Address masticatory muscle disorders

TMJ Arthralgia

Arthritides:
- OA
- RA
- Ankylosis
Physical Therapy Scope

- Masticatory Muscle Disorder
- TM Joint Disorder
- Cervicogenic Headache, Cervical Disorders
- Contributing Factors

- Central Sensitization
- Sympathetic nervous system overactivation
- Segmental Dysfunction
- Muscle pain referral (e.g., trigger point)
- Nerve root irritation

TM Joint Disorders: Summary

- As needed: Self-management strategies for central sensitization (education, exercise)
- Address masticatory muscle disorders as needed
  - Education: pain, expectation, breathing, sleep, behavioral change
  - Soft tissue mobilization, dry needling
- Joint inflammation/Pain
  - Iontophoresis/phonophoresis
  - Soft diet if needed

TM Joint Disorders: Summary

- Joint mobility
  - Joint mobilization (with movement, if not painful)
  - Exercise: mobility, relaxation, proprioception, stabilization
- Address cervical spine disorders if indicated
- Interprofessional referral if indicated
Cervical Region and Orofacial Pain

- Association between cervical spine, stomatognathic system, and craniofacial pain \(^{29, 30}\)
- Patients with chronic neck pain had greater masseter EMG activity bilaterally at higher force levels \((\text{patients not diagnosed with MMD})\) \(^{31}\)
- Patients with TMD have increased fatigability of cervical extensors \(^{29}\)
- Biomechanical, neurophysiological, and functional associations between trigeminal and cervical systems \(^{32}\)

Orofacial Pain
Cervicogenic Headache and/or other Cervical Contribution

- Muscle/trigger point referral
- Segmental referral
- Convergence at CNS level
- Potentiation: cervical and masticatory muscles
Trigger Points

- Electrical stimulation, moist heat, spray and stretch
  - Research supports immediate effectiveness in decreasing sensitivity of tp's \(^{33,34}\)
  - Manual therapy \(^{34,35}\)
- Dry needling \(^{35,17}\)

Segmental referral patterns \(^{36}\)

Segmental referral patterns \(^{37,38}\)
Cervicogenic Headache: Interventions

- Mobilization, manipulation and exercise reduced HA and neck pain 39, 40, 41
  Mobilization/manipulation improved pain and dizziness in cervicogenic dizziness 42
- Upper cervical mobilization: Reduction in pain in masseter and temporalis (RCT) 10
- Treating TMD helps reduce pain and increase ROM in upper cervical 11

The literature provides a strong rationale for investigating cervical disorders in patients with orofacial pain.

Avoid traction such as this
Summary

- Scan for red flags
  - Primary and secondary HA
  - CNS Disorders
- Examine
- Interprofessional referral as needed
- Make diagnostic classification
  - Include both central sensitization and peripheral nociception as appropriate
- Provide interventions
- Reevaluate
  - Refer out if needed

SUMMARY

Examine: Scan for red flags and refer as needed
Evaluate: Diagnostic Classification
Education: prevent and/or self manage central sensitization
Address masticatory muscle and cervical spine disorder if needed
Interventions for Joint Disorders as needed
Monitor, reevaluate

Red Flags for Referral
- Axis I
  - Masticatory Muscle Disorder
  - TM Joint Disorders
  - Disc Derangement
  - Cervicogenic HA
  - Cervical Disorders, Contributions
- DC/TMD modified

Axis II

Contributing Factors:
- Central Sensitization
- Over-activation of Sympathetic Nervous System
- Arthralgia (hypo, hyper, arthritis)
Physical Therapy Scope

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Contributing Factors

1. Physical Therapy Scope
2. Closing Thoughts
3. Physical Therapy Scope
4. Closing Thoughts
5. Physical Therapy Scope
6. Closing Thoughts
7. Physical Therapy Scope
8. Closing Thoughts
9. Physical Therapy Scope
10. Closing Thoughts

Closing Thoughts

The physical therapist is well equipped to be a primary provider for people with orofacial pain.

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References:


23