Temporomandibular Joint & Cervicocranial Dysfunction in the EDS Patient

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A Look at Two Syndromes: How TMJ and CCD impact the EDS patient as they occur separately or together
Understanding EDS & TMJ

- EDS is the name used for a group of connective, often hereditary tissue disorders

- This condition affects the body’s collagen, which literally holds body together, resulting in loose, flexible joints

- Among affected joints are those in neck and jaw, often triggering TMD, requiring specialized care
What is TMJ?

Temporomandibular Joint Disorder (TMJ or TMD) is “shorthand” for a complex syndrome of dysfunction of the jaw to the skull, including the cartilage and related muscles including the related pain and symptoms.
“Locked” jaw (open or closed)

Jaw deviates to affected side

Problems finding stable bite position
  - Can’t find comfortable “closed” (bite) position

TM Joint noise when opening or closing
  - “Cracking” or “popping”

Overall limited jaw movement
Complex and overlapping symptoms include:

- Frequent headaches, occurring when upon waking and may possibly redevelop in late afternoon
- Abnormal and/or painful jaw movements
- Ear pain
- Pain in or around eye area
- Cheek pain
- Mandibular pain
What is CCD?

Cervicocranial Disorder or CCD is “shorthand” for a complex disorder emanating from the upper vertebra of the neck, including the related pain and symptoms.
Detail of Symptoms:

**Classic Cervicocranial Symptoms**

- Limited head movement, especially rotation
- Trouble swallowing
- Forward head posture
- Upper back pain
- Sore, tender or weak neck
- Frequent “snapping” or “popping” of neck with regular head movement
- Cervical referral pain into facial area
The “Map” of CCD Pain
Where it starts/where it hurts

C-0 (skull) -- Forehead
C-1 (atlas) ------ Eye
C-2 (axis) ------ Cheek
C-3 ----------- Jaw
Convergence Mechanism

• The overlap between Trigeminal nerve and Greater Occipital and Cervical nerves.
• The Trigeminal Nucleus Caudalis extends to the C-2 Spinal segment and to the lateral cervical nucleus in the dorsolateral cervical area
• Symptoms in the Trigeminal or cervical territories produce symptoms in either area
Detail of Symptoms:

**TMJ & CCD Headaches**

**Potential Sources & Types**

- Muscular spasms & stricture
  - Temples
  - Back of head (Occipital)
- Circulatory (constriction OR dilation)
  - Back of head (Occipital)
  - Below the ear (Mastoid)
- Neurological aberrations
  - Migraine-like headache
  - Referral (source ≠ painful spot)
- Skeletal (Vertebral) Displacement
  - Occipital (or Cervical) Referral
Detail of Symptoms:

Ear Pain

- Mimic an earache
- Tinnitus (ringing in the ears)
- Hearing loss
- Itching in ear
TMJ Pathologies

- **Organic**
  - Congenital (Aplasia)
  - Tumors
  - Fractures
- **Arthrogenous**
  - Functional
    - Hypermobility
    - Subluxation
    - Dislocations
    - Internal Derangements
TMJ Pathologies, con’t

- **Inflammatory**
  - Synovitis/Capsulitis
  - Arthritis (osteoarthritis and osteoarthritis, RA)
- **Myogenous**
  - Myositis
  - Myospasm
  - Myofascial Pain Dysfunction Syndrome (MFDS)
  - Dystonia
  - Neoplasms
TMJ Pathologies, con’t

- Idiopathic Condylar Resorption
  - Spontaneous (associated with trauma)
EDS & TMJ and/or CCD: Diagnosis is the Critical First Step

- A diagnosis of EDS often precedes TMJ
- A preliminary exam of skeletal joint mobility is performed to confirm the diagnosis
  - History & Chief complaints
  - Symptomatology
  - Visual & Physical evaluation
  - Hypermobility, including quantifying measurements
  - Soft tissue imaging
Imaging Techniques for TMJ

- **2D**
  - Panograph, Transcranial, Tomograms, Arthrograms

- **3D**
  - CT
  - MRI T-1, T-2, Gradient
  - Flair (fast T-2), (shows edema),
  - STIR (suppress fat content- good for MS diagnosis)
Inflammatory Precautions

1) Vitamin D-3, 2000 to 10,000 IU per day
2) Doxycycline (50 mg, BID for 3 months)
3) Omega 3 – 2.6 mg / day
4) NSAIDS
5) Glucosamine (1500mg /day)
6) TMJ splint
7) Muscle relaxants
Case Studies
Rebecca
22 year old female

- **Diagnosed EDS Patient**
- **Symptoms:**
  - Temporal & frontal headaches
  - Bilateral neck pain
  - TMJ pain over joint & along mandible
    - Pain increases with repetitive chewing
  - C-2 rotation to left
  - Lordotic curve at C-3/4
  - Opening at exam = 23mm; at last appointment = 42mm

- **Diagnosis:** Right reducing, left non-reducing discal subluxation of the TM joints, Lordosis with C-2 vertebral rotation to the left
Case Study 1:
Treatment & Outcome

- Treated with:
  - Pivotal Appliance
  - Anterior stabilizing positioning appliance
  - Cervical stabilization and muscle activation
  - Continued night wear of appliance for stabilization

- Outcome: Less frequent/less intense headaches, jaw and neck pain relief
  - 85% Improvement overall
Sabrina
43 year old female

- **Diagnosed EDS Patient**
- **Symptoms:**
  - Pain in cheek & ear C function
  - Headaches 2-3/week, wakes C in L temporal area
  - Problems began 1.5 years ago when jaw popped out of joint
  - Bite feels off
  - Hyper mobility C jaw motion
    - 40mm opening, but 16-17mm lateral motions
  - Neck tightness & pain in C-3/4 area on left side

- **Diagnosed:** left capsulitis, L retro discitis, bilateral joint hypermobility C spontaneous bilateral meniscal subluxations
Case Study 2: Treatment & Outcome

- Treated with:
  - Pivotal appliance
  - Physical Therapy
  - Stability-specific orthodontics
  - Equilibration of teeth
  - Continued night wear of appliance for stabilization

- Outcome: Near-complete headache relief; significant decrease in neck pain; occlusion and bite stabilized

   90% Improvement overall
In Summary:

• Start with in-depth evaluation and diagnosis
• In the EDS patient, management is often preferable to surgical solutions
• The best outcomes often involve a combination of treatment modalities

Work closely with a Craniofacial Pain/TMJ practitioner with EDS-specific experience, and YOU WILL FIND YOUR ANSWERS!
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