Temporomandibular Joint & Cervicocranial Dysfunction in the EDS Patient

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.

Detail of Symptoms:

Abnormal Jaw Movements & Pain

- "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
Classic TMJ Disorder Symptoms

- 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-O (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 = 45mm; 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

Diagnosed EDS Patient
Symptoms:
- Pain in cheek & ear C function
- Headaches 2-3/week, wakens 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 C3-4 area on left side

Sabrina
43 year old female

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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