Introduction to

TMJ
Temporal Mandibular Dysfunction
RESPECT
Anatomy

- Ginglymoarthrodial joint (jing‘gli-mo-ar-thro’de-al)
- Bone component
- Cartilage
- Disk
- Ligaments
- Synovial lining and fluid
Bones

- Condyle
- Temporal Bone
Disk

- biconcave appearance
- dense fibrous tissue
- no innervation or vascular supply
- separates superior and inferior joint spaces
Cartilage

- absorb shock
- distribute load
- decrease friction
- avascular and aneural
- fibrocartilage vs hyaline cartilage
Ligaments

- capsule
- stylomandibular
- sphenomandibular
Synovial Membrane

- Type A-ingestion of debris
- Type B-secretory
Synovial Fluid

- reduces friction/lubrication
- nutrition to non-vascularized tissues
- removes debris
Muscles of Mastication

- Temporalis
- Masseter
- Lateral and medial Pterygoids
- Temporalis Tendon
Blood Supply

- Superficial temporal
- Anterior tympanic
- Ascending pharyngeal
- Maxillary artery
- Deep auricular
Innervation

- Auriculotemporal nerve - multiple branches
- Masseteric and deep posterior temporal nerve branches
CHIEF COMPLAINT

- Location
- Duration
- Pain Scale
- Affect on Life
- Stress level
- Nutrition status
- Sleep patterns
- Locking
- Noises - changes in noises
- Ear symptoms
- Joint pain throughout the body
CAROLINAS CENTER FOR ORAL & FACIAL SURGERY
TMJ/FACIAL PAIN QUESTIONNAIRE

Date: ____________________ Date of Birth: ____________________
Referring Doctor: ____________________
Describe your problem: ____________________

What other Doctors or Healthcare Providers have you seen regarding this problem?

Help us locate and visualize your pain:
Instructions: On the scale below, mark where your pain falls most of the time with a line (/); mark when pain is at its worst with a circle (O); and mark when your problem is at its least with an (X).

<table>
<thead>
<tr>
<th>0/No Pain</th>
<th>25</th>
<th>50</th>
<th>75</th>
<th>100/Worst Pain</th>
</tr>
</thead>
</table>

(1) How long has this pain been present?
(2) Is the pain consistent or intermittent (meaning "off and on")?
(3) When is the pain worse? (circle one) MORNING AFTERNOON EVENING
(4) Does it hurt to move your jaw? (circle one) YES NO
(5) Does anything you do make the pain worse? If so, what?

THE PAIN / ACHING IS HAVING THIS EFFECT ON MY LIFE:
NONE: No effect or slight. Can work/play but am aware of the pain.
MODERATE: Some days I am unable to function.
SEVERE: Most days I am unable to function. DEBILITATING: I do not function at all.

MARK (X) ON THE SCALE BELOW:

<table>
<thead>
<tr>
<th>0 / NONE</th>
<th>25 / SLIGHT</th>
<th>50 / MODERATE</th>
<th>75 / SEVERE</th>
<th>100 / DEBILITATING</th>
</tr>
</thead>
</table>

(Please outline or draw on images below the area that are painful)

(R) (L)

HOW DOES THIS PAIN INTERFERE WITH YOUR NORMAL DIET? (Mark an (X) on the scale below.)

0 I can eat a normal diet without pain. 25 I can eat a normal diet with minimal pain. 50 I can eat a normal diet sometimes but usually eat soft or non chewy foods and have a fair amount of pain. 75 I can eat a soft diet only. My pain interferes with eating. 100 I cannot eat a normal diet without pain. I am mostly on liquids.

(6) Was there any event or injury which you believe may have caused this problem / pain?

(7) Does the problem / pain limit your function? If so, how?

(8) Does your pain interfere with:
CHewing SPEAKing SLEEP LIFE IN GENERAL?
(9) Does your joint make noise?
CLICK GRIND POPPING
(10) Does or has your jaw ever locked?
OPEN CLOSED BOTH
(11) Do you do anything that mitigates your pain / problem(s)?
GRIT OR GRIND YOUR TEETH NAIL BITING CHEW GUM CLENCHING

WHAT TYPE OF TREATMENT HAVE YOU HAD FOR THIS PAIN / PROBLEM?

Medicines:
Counseling:
Occlusal Adjustments:
Splint: How Many?
Orthodontics:
Physical Therapy:
Other:

DO YOU HAVE ANY OF THE FOLLOWING?

Sinus problems YES NO Skin Disease YES NO
Allergies Headaches
Periodontal Disease Migraines
Sensitive Teeth Shoulder Pain
Nervous Stomach Neck Ache
Ulcers Rheumatoid Arthritis
Dizziness Hearing Changes
Anxiety Ear Ache
Depression Ringing in Ears
Home / Job Stress
Describe Allergies:
Headaches

- migraines
- cluster
- tension
Therapies

- Surgeries
- Injections
- Medications
- Splints
- Equilibrations/Ortho
- Counseling
- Massage/Acupuncture/Chiropractor
- Physical Therapy
Anything we did not cover?
EXAM
Joint Exam

- Palpation - anterior and posterior recess
- EAC
- Auscultation - clicks, crepitus, smooth
- Range of motion
- Deviation vs deflection
Normal

Jaw Closed

Clicking

Jaw Open

Click

Locking

Jaw Closed

stuck behind cartilage
Occlusion

- Class I, II, III
- Overbite, overjet, open bite
- Midlines
- Wear patterns
- Note missing teeth
- Always r/o dental pathology
BE THOROUGH!
ALWAYS DO A FULL
HEAD AND NECK EXAM
IMAGING

TYPES OF X-RAYS
- PA
- Panorex
- CT scan
- MRI
- Bone scan
DIAGNOSIS

• extracapsular
• intracapsular
EXTRACARSULAR

- Muscular
- Fracture
- Pathology
- Calcified styloid process
- Coronoid hypertrophy
INTRACAPSULAR

- Anterior disc dislocation
- Capsulitis
- Synovitis
- Degenerative joint disease
- Adhesions
- Fracture
- Synovial chondromatosis
Common ICD-10 Codes

- F45.8  Bruxism
- M77.8  Tendonitis/capsulitis
- M26.69  Joint sounds
- G44.209  Tension Headaches
- M26.633  Articular disc disorder
- M26.52  Limited range of motion
- G24.4  Oralfacial Dystonia
- M26.623  Joint arthralgia
- M65.9  Synovitis
- M79.1  Muscle myalgia
- M19.91  Osteoarthritis/DJD
Treatment

- Education
- Modification of habits
- Rest/Heat/Massage
- Diet restrictions
- Stress reduction/Counseling
Medications

- NSAID
- muscle relaxers
- steroids
- antidepressants
Trigger point injections

- Marcaine .25%
- Kenelog 40mg
Splints

- NTI
- Maxillary/mandibular
- anterior repositioning
- Walmart special
BOTOX
Physical Therapy

- Active and passive range of motion
- Massage
- Tens unit
- Ionophoresis
- Ultrasound
- Dry needling
- Laser therapy
- Exercise
- Education
Arthrocentesis

- lysis and lavage with manipulation
- effective
- inexpensive
- office procedure
- minimally invasive with fairly low risk
- blind procedure
Management not cure
What is Success?
References

- Carruthers, Alastair and Curruthers, Jean: *Botulinum Toxin*. 2005