Sheet no. 8 - 30/3/2015

Refer to slide : #2 “ Classifcation of TMJ diseases from slide #28 “ – Doctor : Aya Al-asmar

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* In the Classification of temporomandibular disorders , we mentioned that we have something called **“ Joint inflammatory disorders ‘’** and it’s going to be our topic for this lecture ..

-First of all we should know that any examination to Joint inflammatory disorders will be associated with ;

1 ) Continuous deep pain accentuated by function

2) Referred pain

3 ) Excessive sensitivity to touch

4) Increased muscle spasm activity

Regarding points 2,3,4 they are called secondary excitatory effect.

* + - **excitatory effect means that NOT every inflammation should be associated with it** .. for example ; SOMEtimes we might feel referred pain in the TMJ , lower jaw , back neck muscles ..

excessive sensitivity to touch will result in malocclusion because the patient will start looking for the most suitable occlusal position for him that’s associated with less pain “ mentioned in the last lecture in more details “

 lets refresh our memory with the components of the TMJ ; its an **articular bony surfaces** , between them we have **disc** , and **synovial membrane with the fluid** inside it .. according to these components we can say that **joint inflammations are Classified into**:

* + Synovitis or capsulitis “ if the inflammation happened in the synovial fluid or capsule “.
	+ Retrodiscitis “ if in the disc “.
	+ Inflammatory arthritis “ if in the articular bony surfaces “.

**# Synovitis or capsulitis :**

* When the synovial membrane or capsular ligament become inflamed, the joint area may be tender to palpation and will occasionally be swollen. “ The problem here that we can’t feel the swollen at early stages of inflammation “
* Discomfort during mandibular movements. “ because 1) the area will be filled with inflammatory cells so we can’t move it easily. 2) due to pain “
* Etiology “ causes of it “ : trauma, wide opening, abusive movement – excessive laughing or yawning - , spreading of an adjacent inflammation.
* Continuous pain originating in the joint area is often described.
* Acute malocclusion

**# Retrodiscitis :**

* Trauma is the most frequent cause (external or internal)
* Swelling accompanied by acute malocclusion
* If trauma is extensive, intercapsular **bleeding (hemarthrosis)** can occur with ankylosis of the joint 🡪 acute painfull situation .
* Pain accentuated by clenching in centric occlusion and **relieved by clenching on a separator** “ y3ni bekoon 3ndo pain lamma y3od bel centric occlusion bs eza 7ateena eshi y3od 3leeh bebattel yetwajja3 “ ..

**# Inflammatory arthritis :**

Might be related to spreading of inflammation in the bone in general from anywhere in the body , or it might be due to an inflammation in the bony articular surface itself ^\_^

* Results in the destruction of the articular and subarticular osseous structures of the joint .
* Constant pain that is accentuated by movement .
	+ - Subclasses of inflammatory arthritis :
	+ Traumatic arthritis : When the TMJ receives trauma , the initial response is often synovitis. Other structures in the joint can also be injured.
	+ Degenerative joint disease
	+ Infectious arthritis
	+ Rheumatoid arthritis
	+ hyperuricemia
* **Degenerative joint disease :**

 It is primarily a **NON-INFLAMMATORY** disease .. “ non inflammatory hay eja 3leeha so2al last year w mohem kteer bel ta3reef enna ne7keeha “ , its an unkown disease , might be autoimmune or from mechanical overloading ..

So again ; **it is primarily a non-inflammatory disease in which the articular surfaces of the joint and their underlying bone deteriorate**

**etiology is unknown**; however, it may be associated with mechanical overloading.

Patients usually complain of pain that worsen as the day progresses and **crepitation**.

Note ; “ crepitation is always associated with bone “

Diagnosis is supported by **radiographic** evidence of changes in the **subarticular** surfaces of the joint.

Radiographic evidence like flattening, osteophytes, erosions to the condyle or fossa.

**#The infectious arthritis:**

The cause : It may results from an infection that affect the TMJ alone , or the whole body →that makes a problem in the immune response → systemic disease → reaching the TMJ.

Ways to identification : History , symptoms , clinical examination & blood test

Note about the X ray 🡪 the x ray In degenerative disease will be important to identify the case , while in infectious arthritis there will be no significance for the it because we can't see any bacteria or viruses through x ray .

So, when I suspect **infectious arthritis → take blood test .**

When I suspect **degenerative disease → take an x ray** .

**#Rheumatoid arthritis:**

Its an inflammatory disorder that **affect the synovial fluids & membranes in the whole body** .

The etiology of the disease: as a **force** is placed on the articular surfaces, the synovial cells will release enzymes that damage the joint tissues especially the cartilage . in other words, the idea of rheumatoid arthritis is that the **enzymes in membranes will increase , so synovial fluid is increased & the infiltration is decreased.**

Acute malocclusion may occur (as in any degenerative disease).

**#Hyperuricemia = Gout :**

It’s the presence of **uric acid in the synovial fluid** **of joints in the whole body**. Affects old people and the great toe primarily.

Diseases that affect the whole body are easy to diagnose because they affect the general system of the body.

**# Chronic mandibular hypomobility:**

A patient may come & complains that he/she cant open his/her mouth properly , he has **limited mouth opening for a long time**, & when he opens his mouth pain is started annoying him….. and this what happens in cases of chronic mandibular hypomobility.

So here the **patient suffers from**:

1-limited mouth opening

2- pain… but just when he tries to open his moth more than normal

“ NOTE: elevator muscles are; temporalis – massiter – medial pterygoid “

* Causes:

One of the elevator muscles or all may be contracted (spasm) & cant open the mouth because of myostatic or myofibrotic contraction as a result of trauma or infection & the patient didn’t get recovered → there will be a healing process with fibrosis , scar formation or disarrangement of the mascular fibers → leading to myostatic or myofibrotic contraction of the muscles , or fibrosis or ankylosis in the capsule itself.

What happens is that when modulation and healing happens , blood according to infiltration to physiological processes there may be one of the following:

-Normal healing

-Or Fibrosis

- or Ankylosis (bone formation)

So the problem here is mainly due to SCAR FORMATION may be in:

- the bone(ankylosis)

- capsule

-or muscles

**Growth disorder**



 **hyperplasia**

 **hypoplasia**

these conditions happens mainly with children & growth development, patients are born with one of these conditions.

In certain conditions, when there is fracture, swelling & trauma…then this is not a growth related condition , here the patient mainly is adult.

* **Neoplasia** 🡪 the most important thing about it that in this case there is **NO PAIN** , unlike all previous cases that we talked about , but **in advanced cases when the neoplastic cells infiltrate muscles there will be pain .**

Note: if there is aggressively growing bulk for a short time then this may be a neoplasm more than a benign case, but when there is pain , inflammatory signs , sensitivity & fever then we may suspect a neoplastic activity & we do directly MRI.

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 **P.s : Once you choose HOPE , anything’s possible nshallah ♥**