***Title of Lecture:* diagnostic procedure**

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Diagnostic procedure

It is very important to reach a correct diagnosis in order to perform the prober treatment.

Always patients come to the dental clinic with pain, the source of pain is the teeth, TMJ, ears, eyes or different parts of the body which can mimic The toothache so we are supposed to differentiate the dental pain from other sources of pain.

Systemic approach:

 "Step by step systemic approach “diagnosis must be followed

Ex : Starting from the right 3rd molar buccally until reaching the 3rd molar in the other side and then I go lingually all the way down until reaching the point where I starts than I check the tongue the palate , vestibule and so on all that with the help of charting .

Diagnostic procedure:

 “Chief complaint is question no. one “

Dental history and medical history must be written down

Ask the patient about symptoms which are described by the ptn ( subjective ) and objective ( signs )

Radio graph examination

Then analyzing all these information together until reaching what so called diagnosis

Endodontic treatment:

1. Non-surgical RCT

2. Surgical RCT

3. Retreatment

4. Root section or root amputation (sometimes we have 3 roots and one of the roots was diseased we take the root out and leave 2 roots).

5. Bleaching

6. Intention replantation (treat the tooth out of the socket and return it back to the socket)

7. apexification apexogenesis

8. Treatment of trauma

9. Vital bone therapy

The general dentist should be professional in

1. Diagnosis

 2. Treatment planning

3. Treating routine cases : RCT , cons , perio , prostho …

What are the information that should be gathered from the patient for correct diagnosis ?

1) Chief complaint , should be written by the patient’s own words because it’s a condition that promote the patients to seek treatment

chief complaint usually is pain but sometimes the chief complain is fracture , discoloration , swelling , defective restoration , bad taste or smell. 2.

Pain is the most obvious and important one .

good understanding of the physiology of pain is essential to the diagnosis and treatment of painful condition

Pain: is an unpleasant sensory and emotionally experience associated with actual or potential tissue damage .

Simply pain is the driving cause of the patient .

By now

2) Medical history

You can’t give anesthesia to the patient without knowing that the patient has any disease that is contraindicated with epinephrine or starting RCT with cavity preparation , cleaning and shaping using files without giving premeditations sometimes you have to give the patient antibiotics before.

 AB prophylactic is indicated to limited no. of cardiac conditions like artificial hurt valve, previous history of endocarditis , congenital heart tissue repair , and some hart transplant .

So we pre medicate by giving the patient AB before you start working .

We give the patient two grams of amoxicillin ( 1/2 – 1 ) hr before the procedure.

If the path is allergic toward amoxicillin we give the patient clindamycine 600 mg 1 hr before the procedure so from the medical history we knew that the patient needs premedication or not .

For asthmatic patient :

1) we instruct the patent we keep the inhaler with him

2) setting the patient in supine , upright position and make a hole in the rubber dam for better breathing

“There is no RCT without rubber dam “

Bisphosphonates is a medication that is used for ptns with :

1 vit D deficiency for osteoporosis

2 breast, prostate cancer

One of the side effect for this medication is jaw bone necrosis so for these ptns we try to save their teeth and not to extract it because extraction causes traumatic injuries so we do RCT

3) Dental history

 Summary of the present and past dental history which give us information of the attitude toward the dental caries and treatment and it is important as initial step in making specific diagnosis.

 We have two types of symptoms:

1. Subjective symptoms : the symptoms that expressed by the patient ( symptoms ) or ( chief complaint )

2. Objective symptoms : you are going to notice it and know it exactly ( signs )

The First two steps that should be analyzed by the dentist during the diagnosis :

1) Visual and tactile inspection ( extra oral and intra oral )

2)Radiographic evaluation

 Extra oral and intraoral examination should be in :

1. Systematic manner

2. while talking to the patient you can observe if he has any asymmetry like swelling in one side of the face

\* after carful extra oral visual examination the dentist should move inside the mouth sometimes you may find fistula from inside and outside

Extraorally we examine the lymph nods , TMJ , muscles of mastication and so on or any abnormally or swelling

Using the mirror is important in order to see any abnormally of soft or hard tissues .

You have to Be able to evaluate the oral hygiene and integrity of the dentition .

poor oral hygiene or numerous missing teeth is indication that the patient has minimal interest in maintaining the dentition, Sometimes you see a discoloration and you couldn’t know exactly if it’s a discoloration or caries, then check the color and the shade.

The Dr showed a pic for a tooth:

 tooth has a necrotic pulp the dark color of the tooth is indication for necrosis, the yellow color is indication for calcification of the pulp chamber, all observable data should be recorded on the chart (should be written direct, don’t wait to write it later)

We take radiograph (radiograph is very important), there is no examination without a radiograph and there is no radiograph without examination, it comes side by side

The Dr showed a radiograph that has a radiolucency on the apical region (periapical periodontitis) and a bridge

One student asked if the canal is calcified is there any need for making RCT, and the Dr said that there is no need for RCT because the patient won’t have a symptom for pain so we leave it

The Dr showed another pic for a fracture on one of the centrals which has a dark discoloration >> the treatment plane for this tooth is doing RCT then make a composite or crown (depends on the patient)

P.S:

At the beginning of RCT you should take a radiograph with a rin as well as when you finish your work (Rin well give you an accurate length of the canal) but the radiographs which you take in between there is no need for Rin or as you like, you can use it or not.

REMEMBER that you are representing your work by the radiograph ;)

The number of radiographs needed:

1- Bitewing radiographs >> the reason for taking bitewings is to know how far the restoration or the lesion from the pulp horn ,, if the restoration is near the pulp the patient will complain of sensitivity of that tooth

2- Periapical radiographs >> to know if there is a lesion on the root or the surrounding tissues

Radiograph is the most important diagnostic and reliable method for the root canal space and the relevant tissue that can’t be observable by eye.

Radiograph can give us

• Overall length of the tooth

• size of pulp chamber

• pulp horn (stones)

• number shape of the roots (the carve which appear on the radio graph is mesiodestal << will not appear if it was busccolungual)

• apical foramen or if there is apical radiolucency

• external or eternal resorption (difficult to treat by us)

• immature tooth

• existence of horizontal fracture

• if the apex open or closed

Sometimes when we look to the radiograph we can see the pulp chamber and a dark line (we can see this line for 3 mm and then interruption will happen) and a white line will appear instead of!! This sudden change from dark to white is an indication for bifurcation (one canal will become two canals) or trifurcation (three canals)

We have to read the radiograph in systematic way:

• we start from the coronal area

• periodontal ligaments until reach the apex

• looking for the root canal

RADIOGRAPH is very important, you should spend at least 5 min to read the radiograph

The Dr showed some radiographs:

1- Radiograph for lateral incisor you think the pulp is necrotic! But after doing a RCT the symptoms of the patient didn’t change! Then the problem was from the adjacent teeth which has a lesion proximally (necrotic pulp) superimposed with the lateral incisor (which is normal)

(read the radiograph very well)>>

2- Radiograph which shows root resorption (blunting apex) from orthodontic treatment (large forces for moving teeth in less time) >> no need for treatment bcz the resorption stop when the ortho treatment has been finished,, not pathological one.

GOOD Luck <3