Cons sheet #11+12

Dr. Jamal

By: Dania Jibreel and Rawan Mazen

**this sheet contains only extra notes, so please study it with the slides.

Endodontic surgery or surgical endodontic

What we do in our clinics is non-surgical endodontic or conventional endodontic.

Endodontic surgery is an endodontic procedure done by surgical means by endodontist only and not by an oral surgeon.

Slide 2:

Non-surgical endodontic has high surgical rate between 90-100% .

In California and Boston said SR is : (100 – X)% X: is the expertise of the operator.

Sometimes beautiful Rct didn't resolve the lesion or person's symptoms persist.

In this case we might consider endodontic surgery rather than extraction.

Slide 4:

Periapical surgery:

most important one we're going to focus on it.

American call it Apicoectomy England call it Apexectomy

Slide 8:

First of all you should know the cause of failure before taking any decision.

If we had failure of Rct we should consider re-treatment first assuming that we know the cause of failure.

Surgical procedure is not panacea; so it's the last resort as any other surgical procedure.

Slide 9:

Case showing failed RCT due to the missing canal (the cause), we managed to open and find the 2nd canal so the case is corrected.

Slide 11:

Sealing the apical foramen is the main goal of the surgery

Slide 12:

In conventional endodontic we do <u>orthograde filling</u>

In surgical endodontic its retrograde filling

There is no apicoectomy without retrograde filling, to ensure sealing the apical area.

Some oral surgeon whom believe in themselves, they do apicectomy only this may help for few months but the infection is persist and the lesion will come back.

Slide 15:

Indiscriminate surgery; Surgery is not a cover up for lousy RCT.

Local anatomic factors; as closeness to mental foramen or sinuses

Poor systemic health; as blood dyscrasia, diabetes

Psychological impact; apprehensive patients, young children.. etc

So usually in normal adult patient there is no contraindication.

Slide 16:

The 1st photo on the left is showing 16 YO patient with failed RCT on the left lateral incisor, there is double curve and acute abscess superimposed on chronic periapical periodontitis

TX: Give the patient AB then wait until abscess drained for 10 days then:

Re-treatment to the RCT, Or

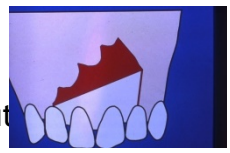
Apical surgery; cutting the roots 2mm then we did retrograde cavity and sealed with amalgam.

The 3rd photo on the left showed the healing after 6 months.

Slide 17

Flap designs:

1. Triangular flap:

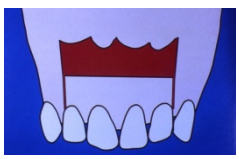


Horizontal intra-sulcular cut

1 vertical incision

Good flap but gingival recession might happen especially if there is a crown

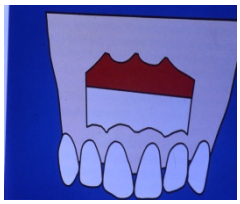
2. Rectangular flap



Grater visualization

But more gingival recession

3. Scalloped flap = ***luebke-ochsenbein***



Flap of choice in anterior endodontic surgery

Incision in attached gingiva 2 mm below mucogingival junction

3 mm above free gingiva following the outline of gingiva.

Slide 19:

We drill the bone to expose the apex of the root, if the lesion was large we might not need to drill already exposed.

Slide 20:

We cut 2 mm with fissure bur it should be perpendicular to the long axis of the tooth .(not as showed in the diagram :/)

Slide 21:

Prepare the cavity

At the past it was prepared using handpiece then by mini-handpies and recently by ultrasonic.

Depth of the cavity is about 3 mm

By ultrasonic vibration we remove the GP, not cutting to avoids cracks inside the root.

Slide 22:

Showing the filling inside the canal

Slide 23:

Suturing for 5-7 days

Slide 24 + 25:

Failed RCT in lower 6 due to 2 broken instruments inside mesial root and overfilling in distal root

It was symptomatic.

This tooth is valuable to the patient, we did retrograde filling for both roots and preserve it.

Slide 26 & 27:

Beautiful crown margins, 2 posts, huge periapical lesion and overfilling in distal root.

Rather than removing the cr, posts and redo the RCT we did surgical endodontic

Slide :28

Failed RCT and anterior crown, even its easy to remove the crown but the patient is happy with the cr and he doesn't want to change it.

So we did apical surgery and retrograde filling

The left photo is taken after 6 months of healing.

Slide 29:

There is another MB canal which is not obturated, then we did apical surgery and retrograde filling. So priapical surgery done from the first molar to the first molar it is contraindicated in second molars , uppers and lowers ,specially lowers due to dense bone ,curved canals and presence of inferior alveolar canal.

Slide 47

What is important about super EBA is 60% zinc oxide (powder), 62.5% ortho-ethoxybenzoic acid (liquid).

Slide 52

A tri-calcium compound, Mineral Trioxide Aggregate provides excellent sealing properties and is extremely biocompatible with periradicular tissues. MTA provides a superior apical seal compared to other root-end filling materials and is not adversely affected by blood contamination. (B = bone, PDL = periodontal ligament, C = cementum)

Slide 53

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Slide 59

Palatal and destobucal roots have good RCT, in the mesiobucal root there are ledge and strep perforation so the solution is root amputation

slide 79

extra oral time should not exceed 10 minutes , if more than 10 min resorption will occur

Slide 83

J-Shape lesion