

Root removal

- **Relative indications for root removal (whether the root is asymptomatic or cause pain).**
 - 1) **Infected root.**
 - 2) **Abscess.**
 - 3) **Sinus.**
 - 4) **Cyst.**
 - 5) **Interference with denture construction.**

- **If the root was fractured after the tooth become mobile during luxation, then the root should be removed, but if the root was fractured before loosening of the tooth, so better to leave it and apply a regular follow up.**

■ **Other factors affect the root removal are:**

- 1) **Vitality of the tooth.**
- 2) **Size and position of the root.**
- 3) **The relation to the vital structures: (inf. Dent. Canal, maxillary sinus.**
- 4) **Systemic conditions of the patient.**

**** But the absolute indication for root removal is when the patient with acquired or congenital heart disease and the local infection may be risky.**

Localization of the root

- In dentate patient, no problem for localization.
- In edentulous patient, the operator may depend on other methods for localization.
 - 1) **Insertion of needle suture.**
 - 2) **Denture base with a wire.**
 - 3) **Anatomical land marks (mental foramen, incisive foramen, buttress of zygomatic bone).**

Methods of root removal

- 1) Closed method.
- 2) Open or surgical method.

Closed method

- 1) (dental elevator or chisel).
- 2) Forceps.
- 3) Apixo elevator (apical 3rd).
- 4) Reamer or file.



Surgical method

- **Mucoperiosteal flap.**
- **Bone removal**
- **Elevator or forceps.**
- **In edentulous jaw, the incision is placed at the crest of the ridge.**
- **While in dentate patient, the incision is placed at the gingival margin of the standing teeth on either side of the R.R (2 sided or 3 sided).**
- **Bone removal is from buccal side (much bone).**

- **When the root is straight, elevator can be placed on any side of the root to dislocate it.**
- **When the root is curved, elevator must be applied to the more convex side.**
- **Uncontrolled force may displace the root fragment**

- **In case of multi-rooted teeth of which all the roots are curved, so the force applied to the convex aspect of the whole root complex.**
- **Surgical separation of the roots.**
- **The force applied to the convex aspect of each root alone to dislocate according to the line of withdrawal.**