Operation technique of tooth removal I.

Indications and contraindications of tooth removal. Biomechanical basis and surgical technique of tooth extraction.

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Tooth removal – a mutilating surgical procedure with soft tissue and bone injury

- Indication
- Operative plan
- Surgical intervention
- Postoperative management
Always
the least serious intervention is to be carried out, that is still likely to provide the best results.
Teeth can be extracted:

- Affected, painful
- Affected, but painless, and sometimes
- Healthy.
Decision on tooth removal

**INDICATIONS**

- absolute > relative I. > relative II. > relative III.

**CONTRAINDICATIONS**

- absolute > relative I. > relative II. > relative III.

Rare, but usually stronger than indications
Indications of tooth removal

Tooth removal requires individual indication account several factors

Factors:

General condition of the patient, other diseases, inflammation process, condition of the tooth and the parodontium, dental status, other features
Indications of tooth removal

’Absolute’ indication:

- Serious, progressive dental inflammations:
  - Cellulitis
  - Odontogenic thrombophlebitis
  - Odontogenic sepsis
Indications of tooth removal

**Relative I. indications:**

- Acute or chronic odontogenic infections, focal diseases (if there are no other therapeutical possibilities)
- Parodontitis, irreversibly destroyed parodontium, highly mobile teeth
- Impossible to root canal treat or irreparably destroyed teeth
- Some cases of injuries of teeth or jaws
Indications of tooth removal

Relative II. indications:

- Unerupted teeth
- Connatal teeth
- Orthodontic indications (persisting-, supernumerary-, misshapen teeth)
- Incorrigible malposition
- Prosthetic indications
Indications of tooth removal

Relative III. indications:

Social circumstances

(for maintenance of tooth):

- Missing personal competency
- Missing instruments, equipments, materials
- Lack of time
- Financial question
Contraindications of tooth removal

“Absolute” contraindications

General contraindications of operations

Acute (cardiac, pulmonal, cerebral) vascular catastrophe e.g., myocardial infarct, coronal thrombosis, stroke, shock

- Haemopoietic diseases (acute leukaemia, agranulocytosis)
- Irradiation of jaws
Contraindications of tooth removal

**Relative I. contraindications:**

- General bad state (cahexia, anaemia, ...)
- Increased susceptibility to infections (any hypo immunity, immunosuppressive therapy, corticosteroid therapy)
- Acute contagious diseases
- Acute infections of the oral cavity
- Coagulopathy, anticoagulant therapy (without consultation or pre-treatment)
- Bisphosphonate administration, high dosage
Contraindications of tooth removal

Relative II. contraindications:
Preserving the space
- Orthodontic &
- Prosthetic aspects
Contraindications of tooth removal

**Relative III.** Contraindications:

- Prosthetic
- Esthetical
- Economical aspects
The steps of tooth removal

After the medical history, the clinical examination, treatment planning and anaesthesia:

1. Positioning of the patient and the dentist
2. Gingival separation
3. Protection of soft tissues
4. Application of forceps
5. Fixation of jaw
6. Removal of tooth
7. Wound care
8. Postoperative instructions
Clinical examination, treatment planning

Accurate examination of selected tooth
- Condition of the crown
- Periodontal condition, mobility
- X-ray exam
- State of neighbouring teeth

Decision of operative technique, operative plan:
- extraction by forceps, elevator, dissection or surgical removal
The steps of tooth removal

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Positioning of the patient and the dentist

- Setting the dental chair, the backrest
- Setting the headrest
The steps of tooth removal

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Gingival separation

- Balogh gingival separator
- Raspatory or chisel (narrow)
- Bein elevator
- Beak of forceps
The steps of tooth removal

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Protection of soft tissues

- By fingers or
- Possibly by mirror (on upper jaw)
Application of forceps

- **Optimal forceps size** – similar curvature of beak of forceps and the neck of tooth – contact on larger area
- **Correct holding of forceps**
- **Grapping the neck of the tooth as apical as possible**
The steps of tooth removal

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Fixation of jaw

- Continuing the protection of soft tissues
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Removal of tooth

According to the type and anatomy of the extracted tooth:

- Luxation (vestibular and oral direction)
- Rotation movement (around the axis of the root)
- Combination of different movements
- Extracting (‘pulling’) movement – only at last stage of removal
Removal of tooth
Biomechanical basis of tooth extraction.
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The steps of tooth removal

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Wound care

- Control and cleaning of alveolar socket – broken bone and coronal fragments, pathological soft tissues
- Looking for possible complications (e.g. injury of maxillary sinus)
- Compressing of alveolar socket
- Control of bleeding
- Biting on a gauze tampon?
The steps of tooth removal

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Postoperative instructions

- Not to suck the wound, not to rinse and spit
- Eating, drinking, smoking
- Oral hygiene
- Painkillers (if necessary)
- Control