Dentoalveolar Surgery
Oral surgery

• Maxillofacial surgery

• Dentoalveolar surgery
Oral surgery

Dentoalveolar surgery

➢ Dental chair/office
➢ Clean
➢ Ex.: impacted wisdom tooth surgery, cyst surgery, surgical tooth removal

Maxillofacial surgery

➢ Operating room
➢ Sterile
➢ Ex.: tumors, developmental disorders, traumatology
Design of the operating room

- Should be isolated and located on an upper floor
- Min. 36-40 m² floor area
- North-facing if possible
Surface design in the operating room

- Seamless and easy to clean floor
- The walls are tiled to the ceiling
  - Rounded, practical
  - White or green
Cleaning the operating room

- Entering only in protective clothing
- At the end after each work day-HYPO
- Clean-up once a week
Design of the dentoalveolar operating room (dental office)

➢ Min. floor area: 14 m² or 9 m² for each chair

➢ Inner height minimum 2,5m

➢ Covering should be washable up to 2.1m, flooring should be antistatic, washable, disinfectable

➢ Furnishing should have a washable surface, should not be crowded

➢ No carpet or plants should be in the room

➢ Door handle, switch should be sleek and disinfectable

Recommendation of the National Center for Epidemiology (2016)
http://www.oek.hu/oek.web?to=16&nid=444&pid=1&lang=hun
Specifics of surgery

Invasive indication is important

Causal

„we give a chance for the human body to cure itself” - MEDICUS CURAT, NATURA SANAT

Manual and instrumental profession
Concept of the surgical disease

**INTERNAL MEDICINE DISEASE**

Ex.: diabetes, hypertension

Can be cured with medicaments

**SURGICAL DISEASE**

Ex.: dental abscess, tumors
Major stages in the development of surgery:

➢ Development of the surgical techniques and instruments

➢ Recognizing the importance of post-operative rehabilitation

➢ Development of the methods and techniques of anaesthesia

➢ Development of hygiene
Historical overview of surgery

Anaesthesia

1842. : William E. Clarke+Elijah Pope performed tooth extraction under ether narcosis

1846 :William T. Morton dentist, tooth extraction under ether narcosis, then on the 16th of October, 1846 Dr. John Collins Warren removed a cervical tumor under the ethernarcosis provided by Morton

János Balassa, the surgeon professor of the University of Budapest was the first to operate under ethernarcosis on the 11th of January 1847.

1844.: Horace Wells- laughing gas (N₂O)

1905. Discovery of Procaín

/Novocain/Alfred Einhorn

1943.: N. Löfgren production of lidocain

1969.: discovery of Articain by Muscheweck
Historical overview of surgery

**Hygiene**

Ignaz Semmelweis (1818-1865)

1844 medical degree - Vienna

Due to the death of his friend (sepsis), he realized the cause of childbirth fever

1855 obstetrics teacher in Budapest

1865 dies in Paralysis progressiva
Historical overview of surgery

Development of the surgical technique

Theodor Billroth (1829-1894)

1871: first esophagostomia
1873: first laryngectomy
1881: first gastrectomia
Historical overview of surgery

Discovery of penicillin

Alexander Fleming (1881-1955)
Biologist-pharmacist
1922: isolation of lysozyme
1928: discovered penicillin
1945: Nobel-prize
Instruments
AESCULAP-Skalpelklingen garantieren optimale Scharfe und Schnitthaltigkeit

Fig. 9 10 10 A 11 12 13 14 15 16
B-99
passend zu den Griffen B-93 und B-97

Fig. 18 19 20 21 22 23 24 36
B-99
passend zum Griff B-94

6 Klinge einer Figur oder 6 Stück sortiert sind in einer luft- und feuchtigkeitsdichten Goldfolienpackung verpackt.

Sortiment I bestehend aus: Fig. 10, 11, 12, 13, 15, 16
Sortiment II bestehend aus: Fig. 20, 21, 22, 23, 24, 36
Mead
DO 520
16½ cm, 6½"

Molt
DO 541
18 cm, 7"

Molt
DO 542
18 cm, 7"

Molt
DO 543
18 cm, 7"

Freer
C-5515
18½ cm, 7¾"

Kendzia
DO 560
17 cm, 6¾"

Williger
B-1933
16½ cm, 6½"

Williger
B-1936
17½ cm, 7"

Lucas
DO 608
15½ cm, 6¼"

Lucas
DO 609
15½ cm, 6¼"

DO 650
15½ cm, 6¼"

DO 651
15½ cm, 6¼"

Hemingway
DO 655
16½ cm, 6½"

DO 656
16½ cm, 6½"

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Chirurgische Nähnadeln, Nadeldosen

B ⅔ Kreis – Dreikantspitze

G ½ Kreis – Dreikantspitze

E ½ Kreis – Rundspitze

Ob

Alle Nadeln werden mit offenem Ohr in hermetisch verschweißten Packungen geliefert.
Most common interventions

• Surgical removal of roots
• Surgical removal of impacted teeth
• Endodontic surgery (apicectomy + retrograde filling)
• Cyst surgeries
• Preprotetic surgical interventions
• Implantation
Removal of roots

- Fracture of the root
  - cervical
  - middle
  - apical
  - root between the soft tissues

Removal: forceps, elevator, dissection, surgical
Removal of impacted teeth

• Impacted tooth = the development of the tooth is completed but its breakthrough is not realized due to a mechanical obstacle (usually in the case of lower third molars)

• Retained tooth = the development of the tooth is complete or partial and does not show a tendency to break through (there is no mechanical obstacle, usually in the case of upper canines)

• „partially erupted”: not completely surrounded by bone
Lower third molar
Lower third molar
Lower third molar
Upper canines

Treatment

1. Surgical-orthodontic
2. Surgical: removal
3. Surgical: transplantation
Upper canines

Localisation:

Palatinal  85%

Buccal    15%
Cysts
Cyst definition:

An epithelium lined sac, surrounded by a connective tissue wall. It is usually filled with fluid or soft material.

A cyst is a tumor-like formation, that can originate from a developmental disorder, or an inflammatory process. It is actually not a tumor, because its growth is not due to cell proliferation (it expands, does not infiltrate).
Retained upper canine + cyst removal
Dental implants

Enosseal screw type implants
Oral / dental / implantology is a new interdisciplinary field of dentistry, its aim is the prosthetic rehabilitation, but it also uses surgical, periodontal and orthodontic methods.
Titanium screw type implants

- Osseointegration: Direct contact between the implant and the osseous tissue

Modern implantology = Discovery of bone integration and the subsequent scientific research.