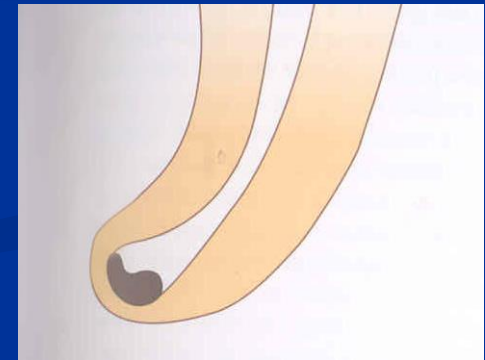
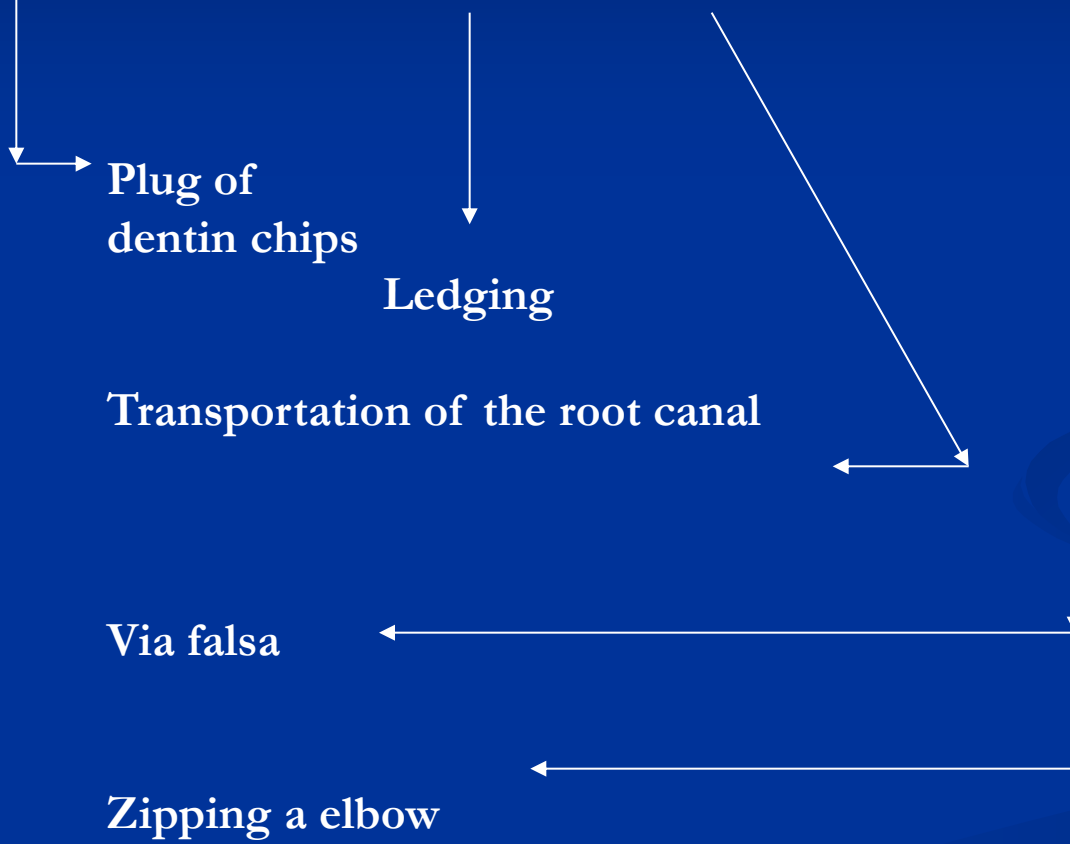
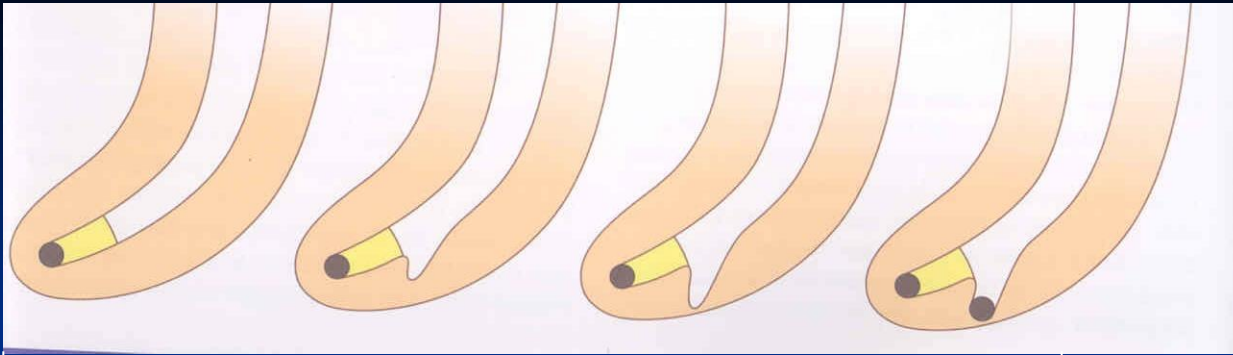


Complications of endodontic treatment

Local

Regional

Systemic



Local complications

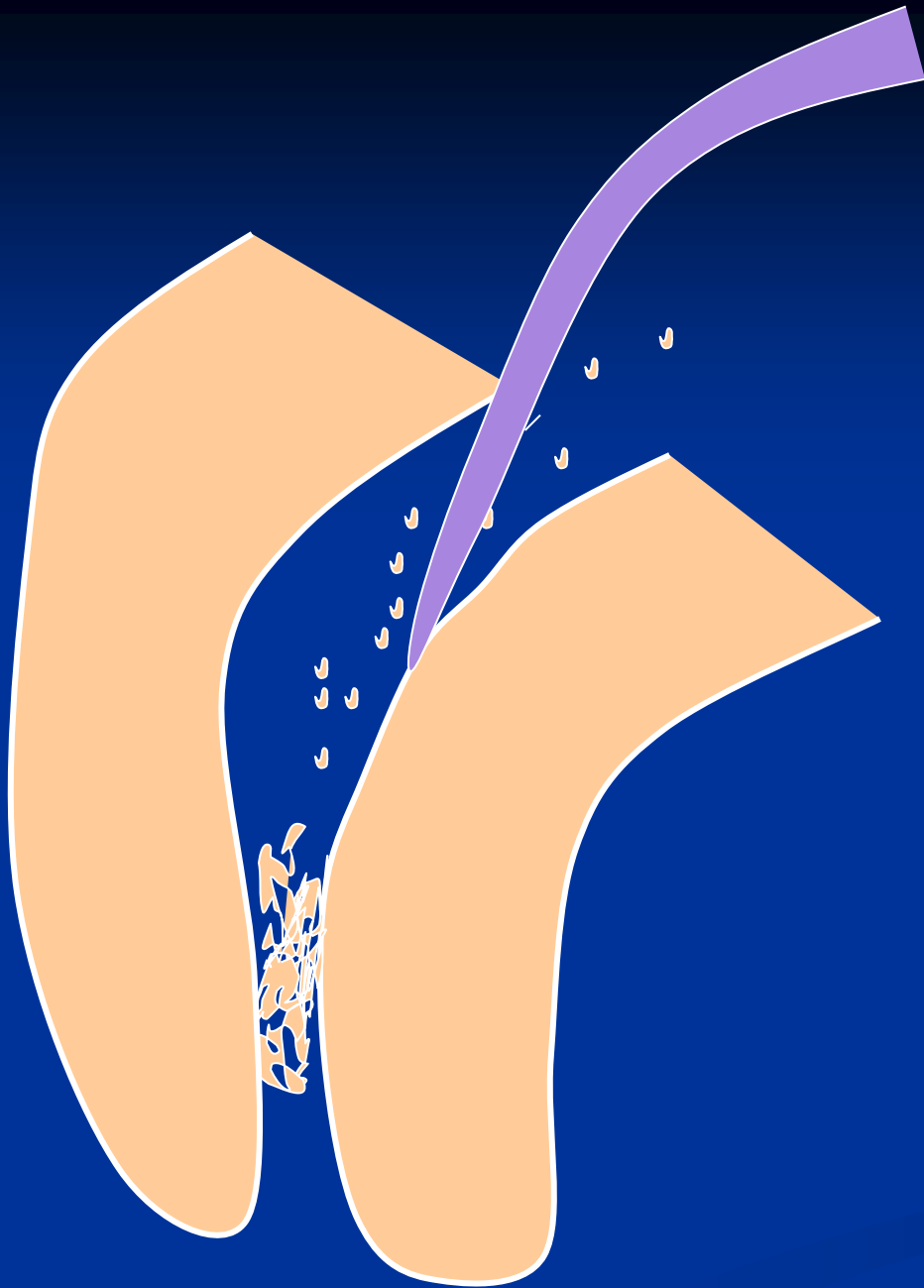
Plug



Reasons

**Insufficient irrigation and
recapitulation**

Loss of the working length



Solution

Repeated careful
instrumentation
with a thin
instrument

*Irrigation is not
effective in this
case!!!*

Ledging



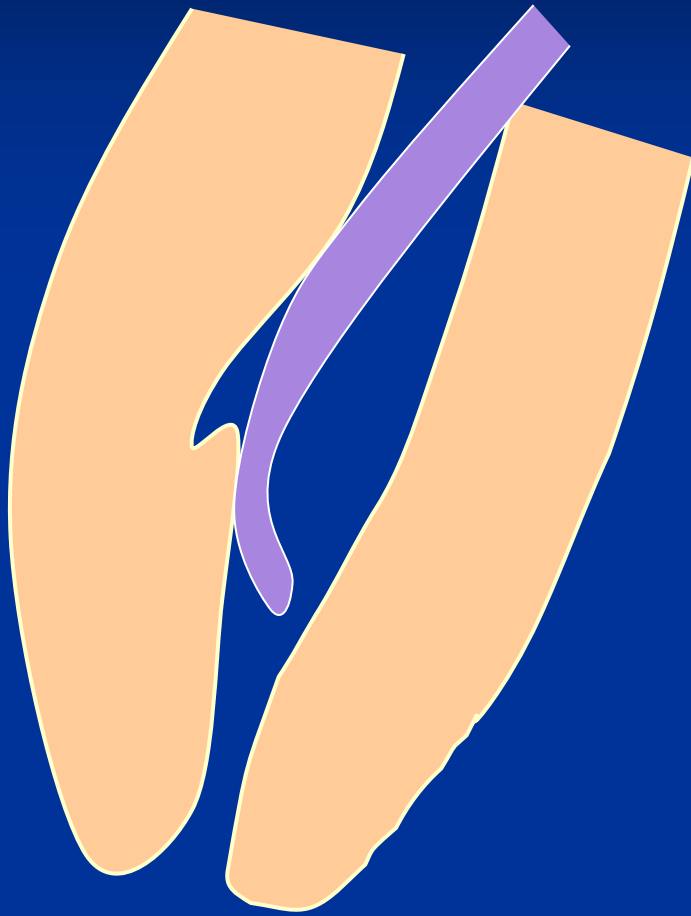
Reasons

The instrument is not bended in advance!

No control of the WL

=

No recapitulation Loss of the WL



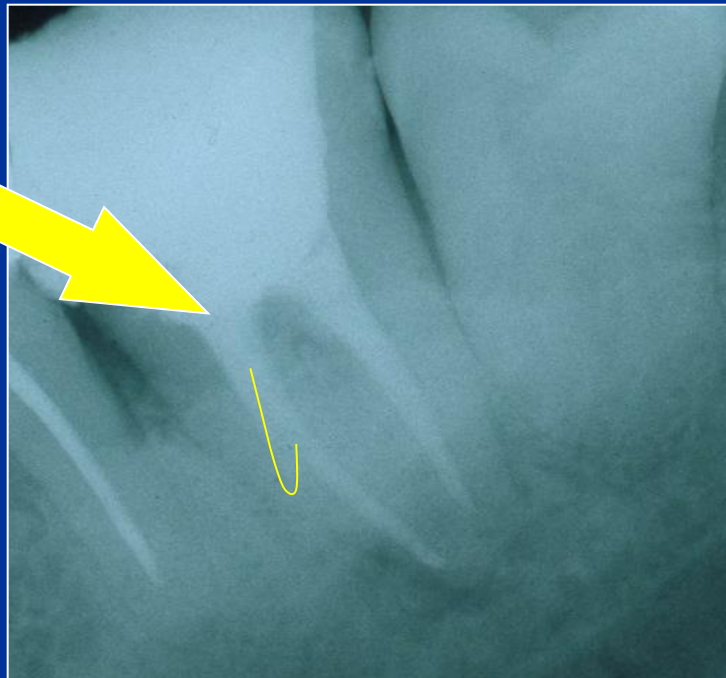
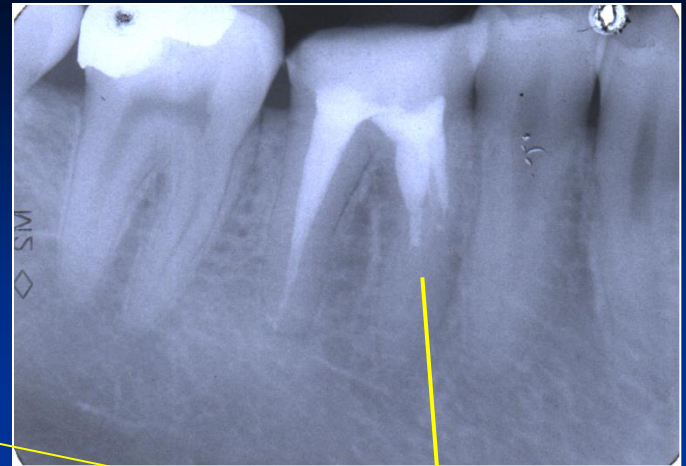
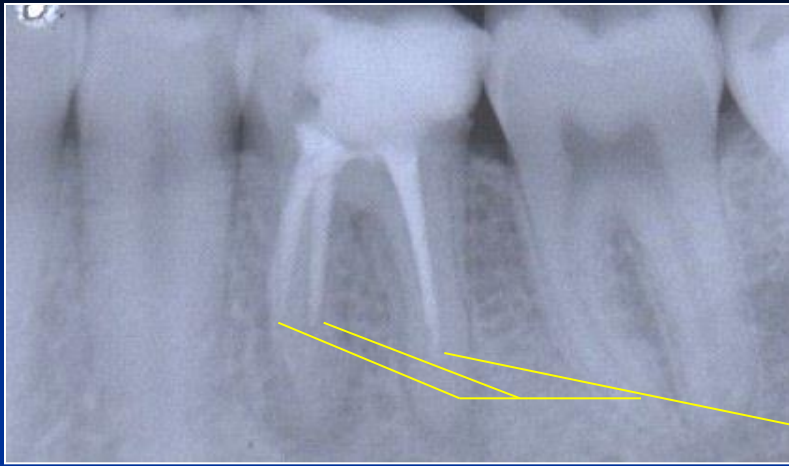
Solution

The instrument must be
bended in advance

Careful but complete rotation

Finishing with the fine filing

No NiTi!!!



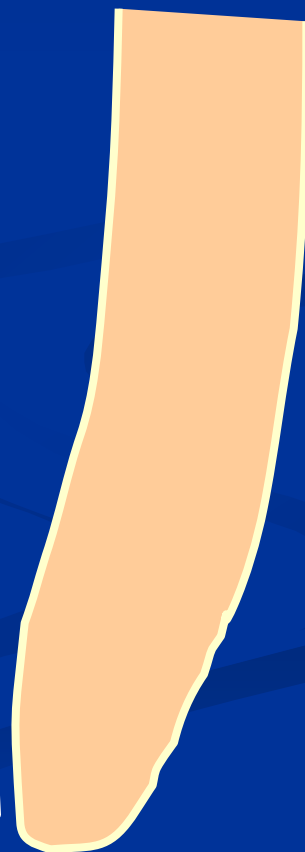
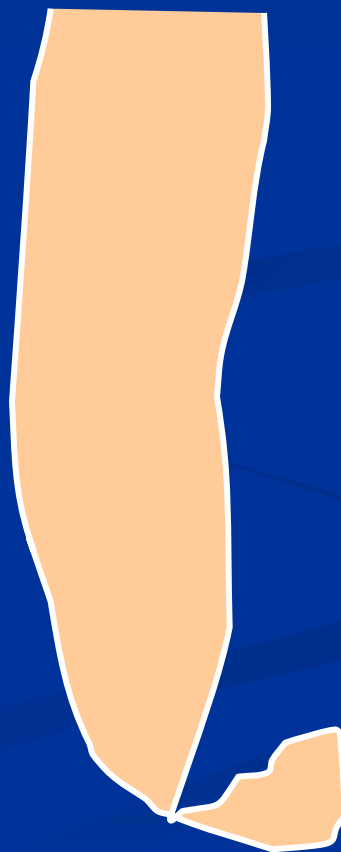
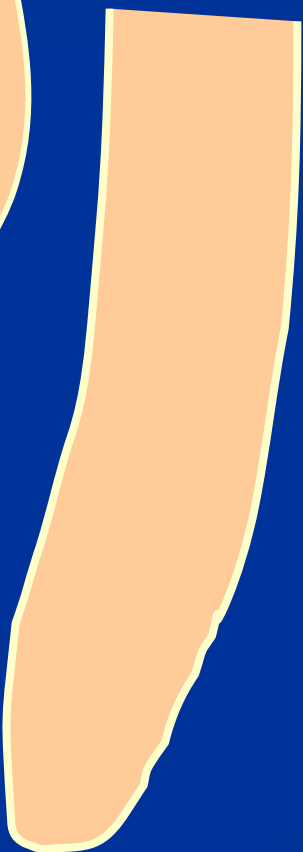
Ledging

Zippering a Elbow



The instrument is not bended in advance!

Rotation in curved canals



Stripping

Reasons

Bad orientation in morphology – no diagnostic x-
Instruments are not bended
Rotary NiTi with a big taper

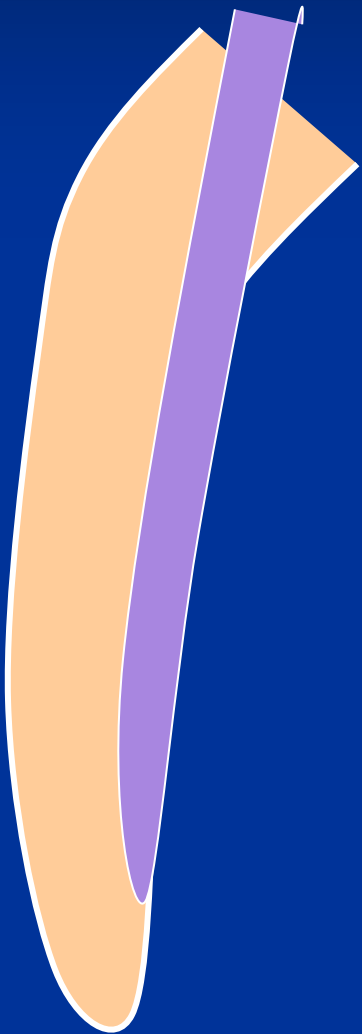
Dangerous zones

Mandibular molars – mesial roots

Premolars, esp. maxillar

Mandibular incisors

Oblast isthmu



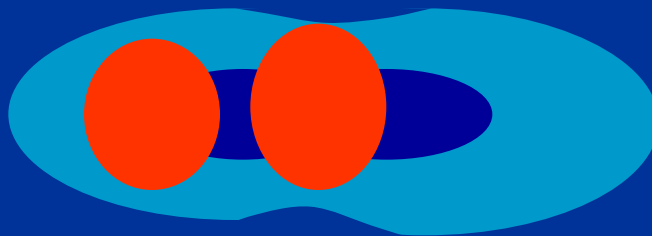
Stripping

Důkladný přehled!

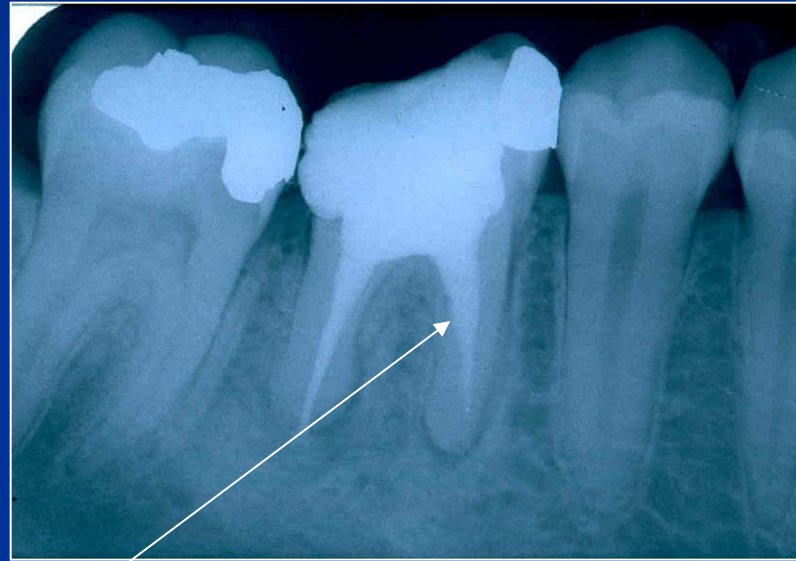
Šetřit oblast isthmu!

Ruční preparace!

Menší kónus NiTi !



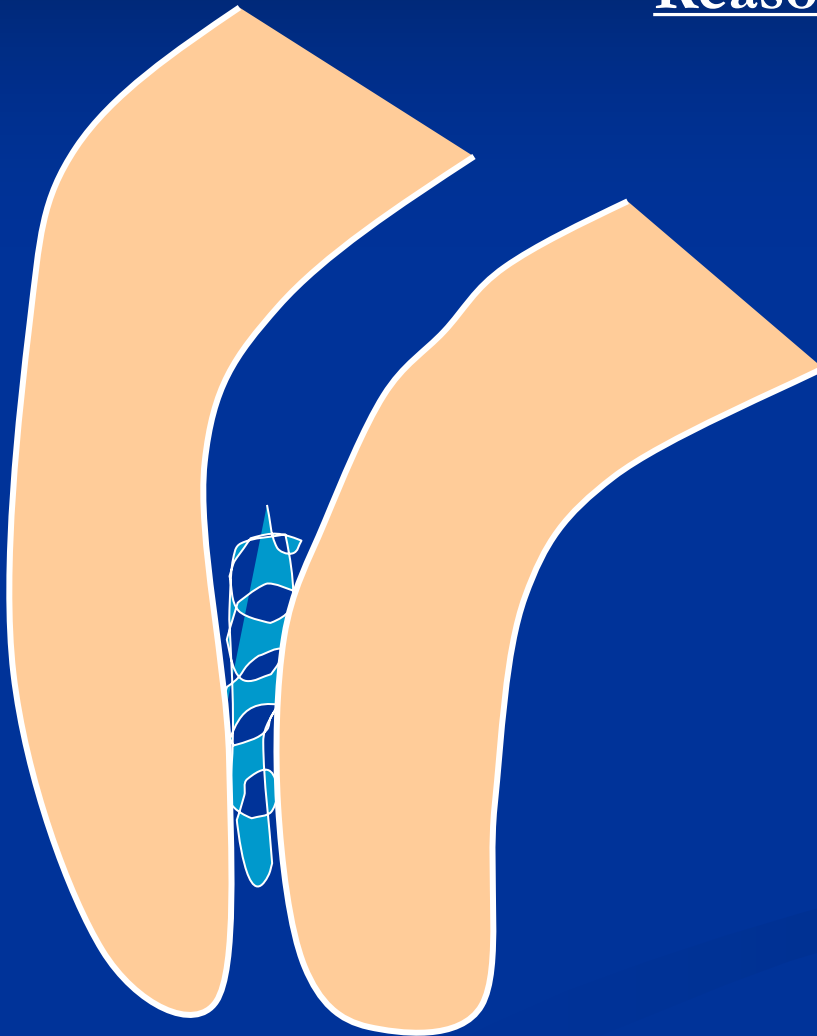
Stripping



Bend the instrument and eventually blunt it !

Fracture of the root canal instrument

Reasons



**Insufficient
coronal flaring**

**Old root canal
instrument**

Aggressive force

**Incorrect
movement of the
root canal
instrument**

Solution

Enlargement of the
root canal till the
instrument

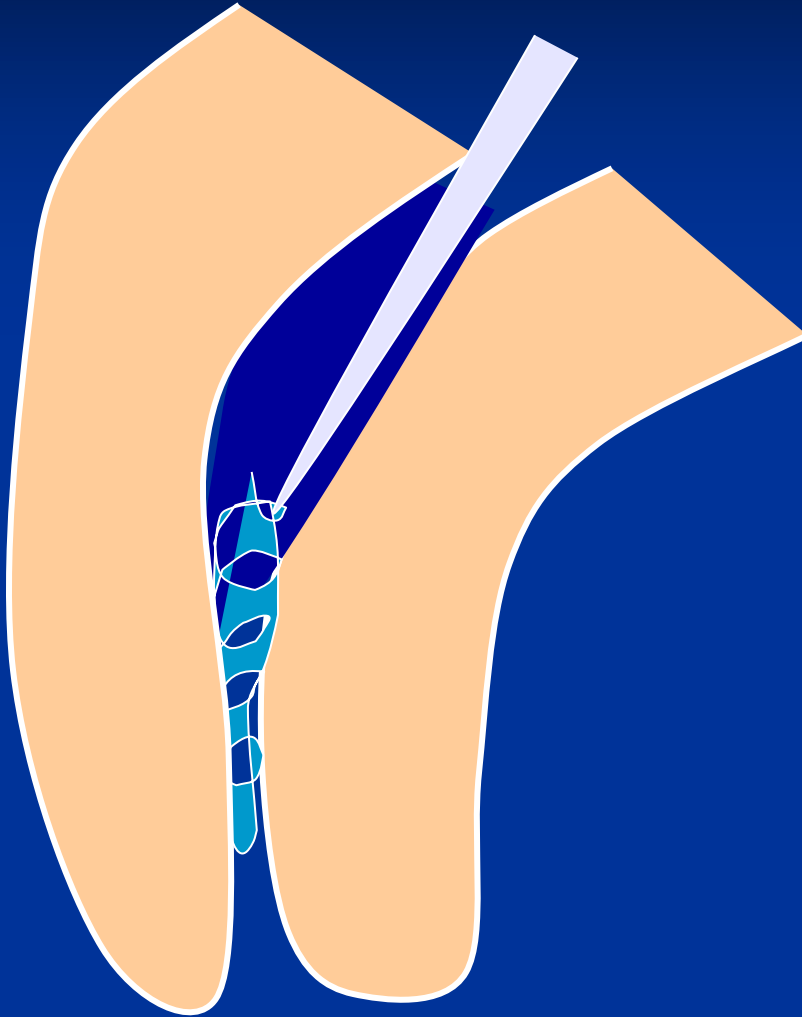
Ultrasound tips

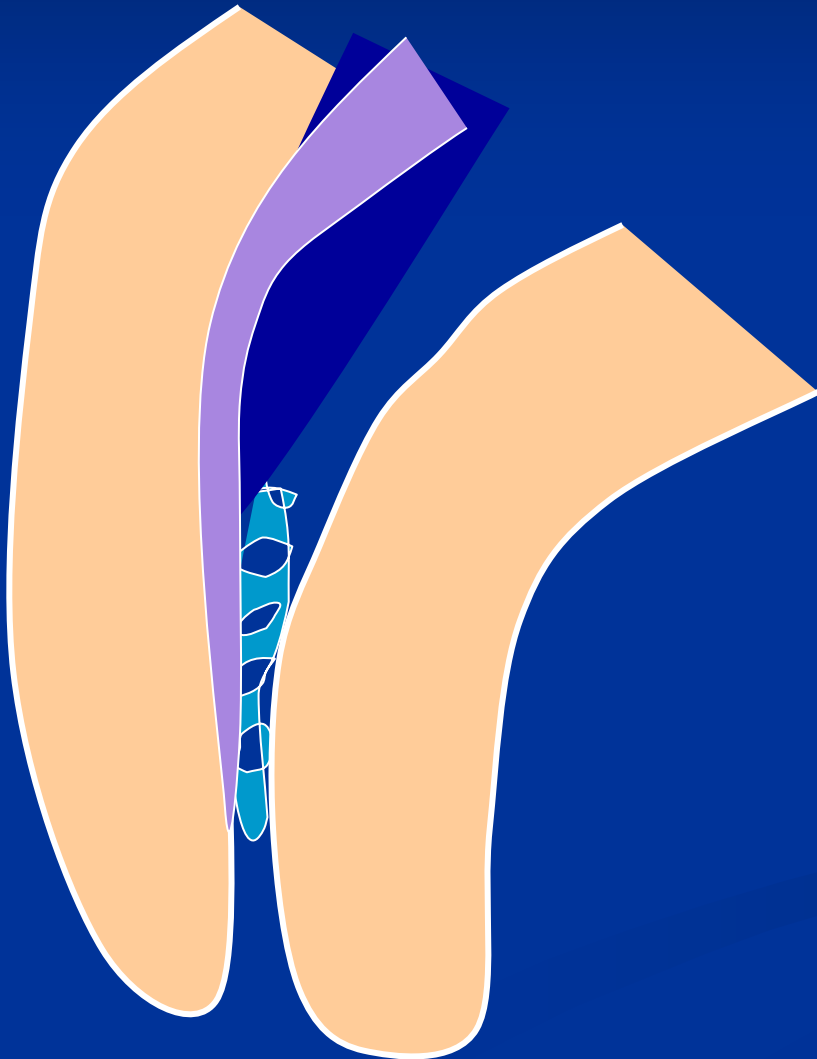
Rotating root canal
instrument – caution!

Bypass

Leaving in

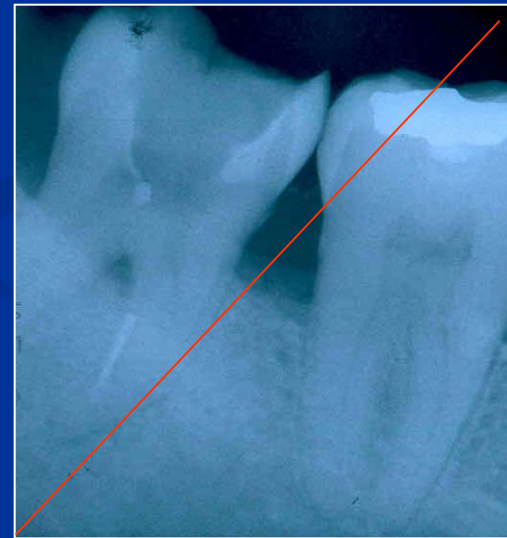
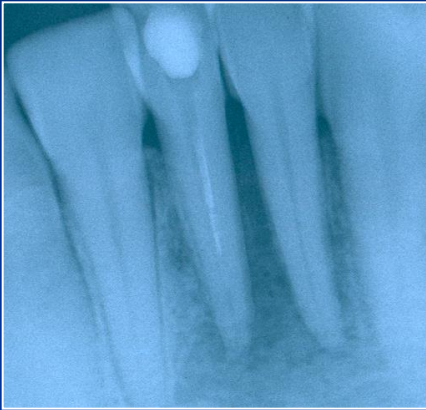
Surgical treatment





Bypass

Fractured instrument



Obliteration



Partial

Obliterate



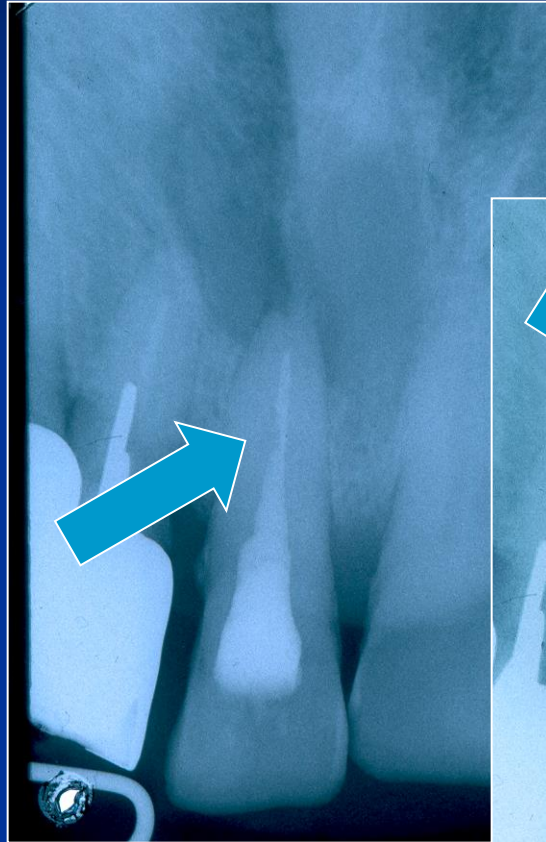
Access!!!

Hand thion
Instrument!

Steel or NiTi

EDTA

Patience

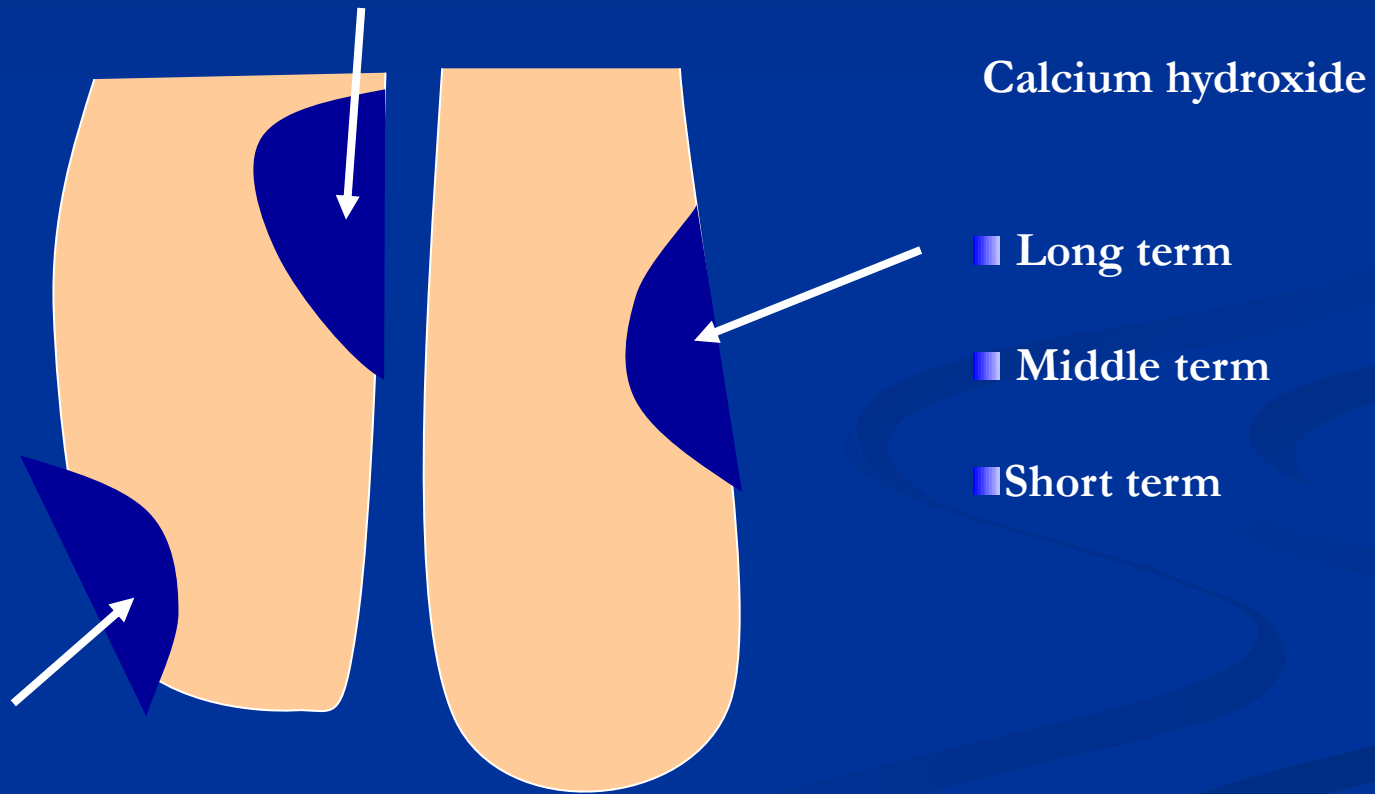


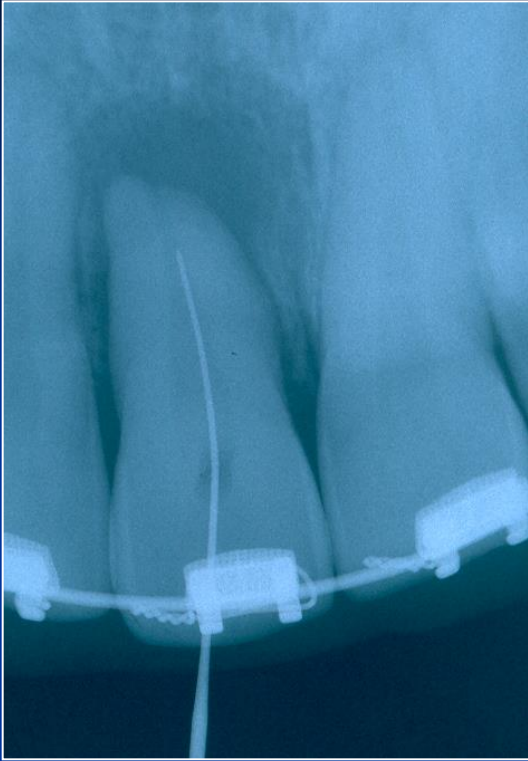
Obliterace

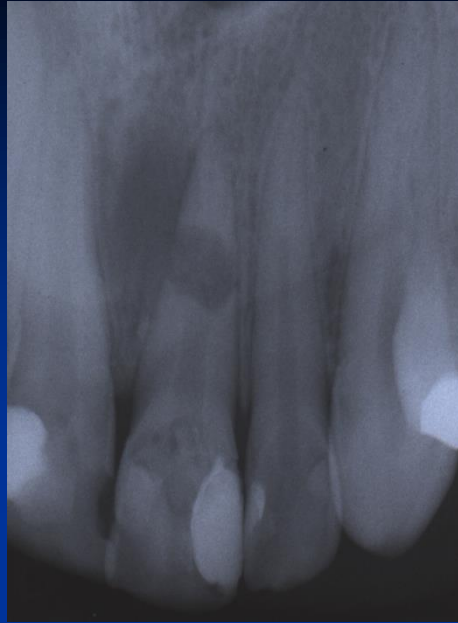


Úplná -
ponechat.

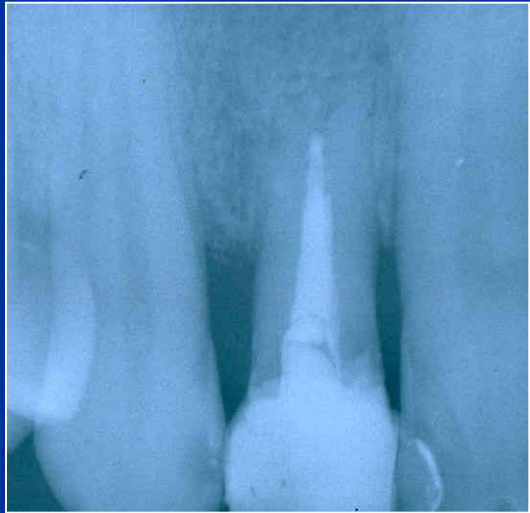
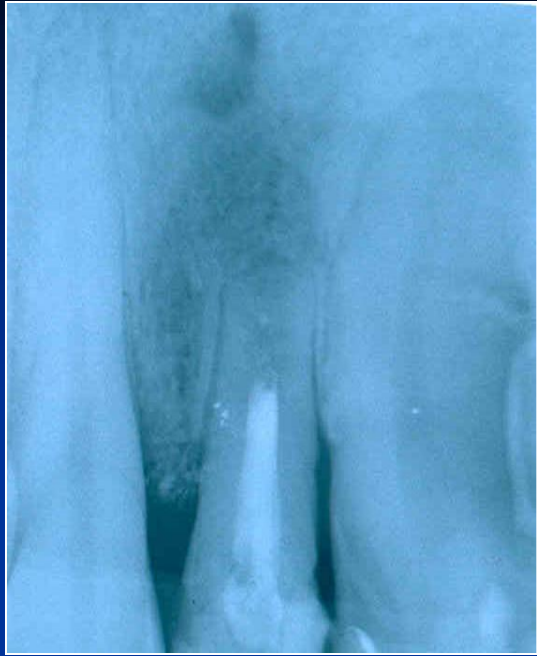
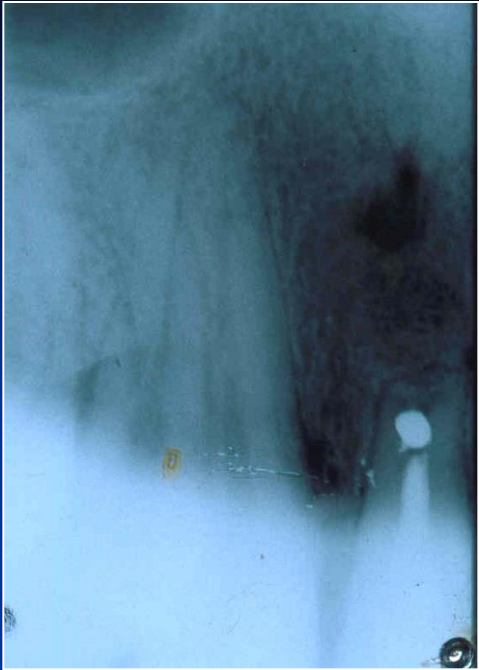
Resorption











Via falsa

- Perforation of the bottom of the pulp chamber or the coronal part of the root canal
- Perforation in the middle part of the root canal
- Apical perforation

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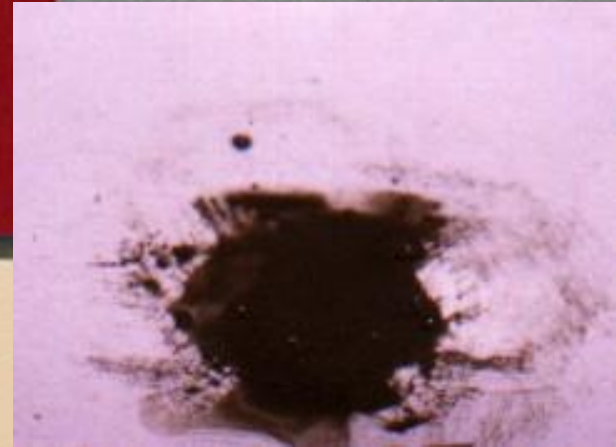
DENTSPLY

PRO ROOT™

*MTA (Mineral Trioxide Aggregate)
Root Canal Repair Material*

Contents: 1 gram (1 treatment)

CE
0120



MTA composition

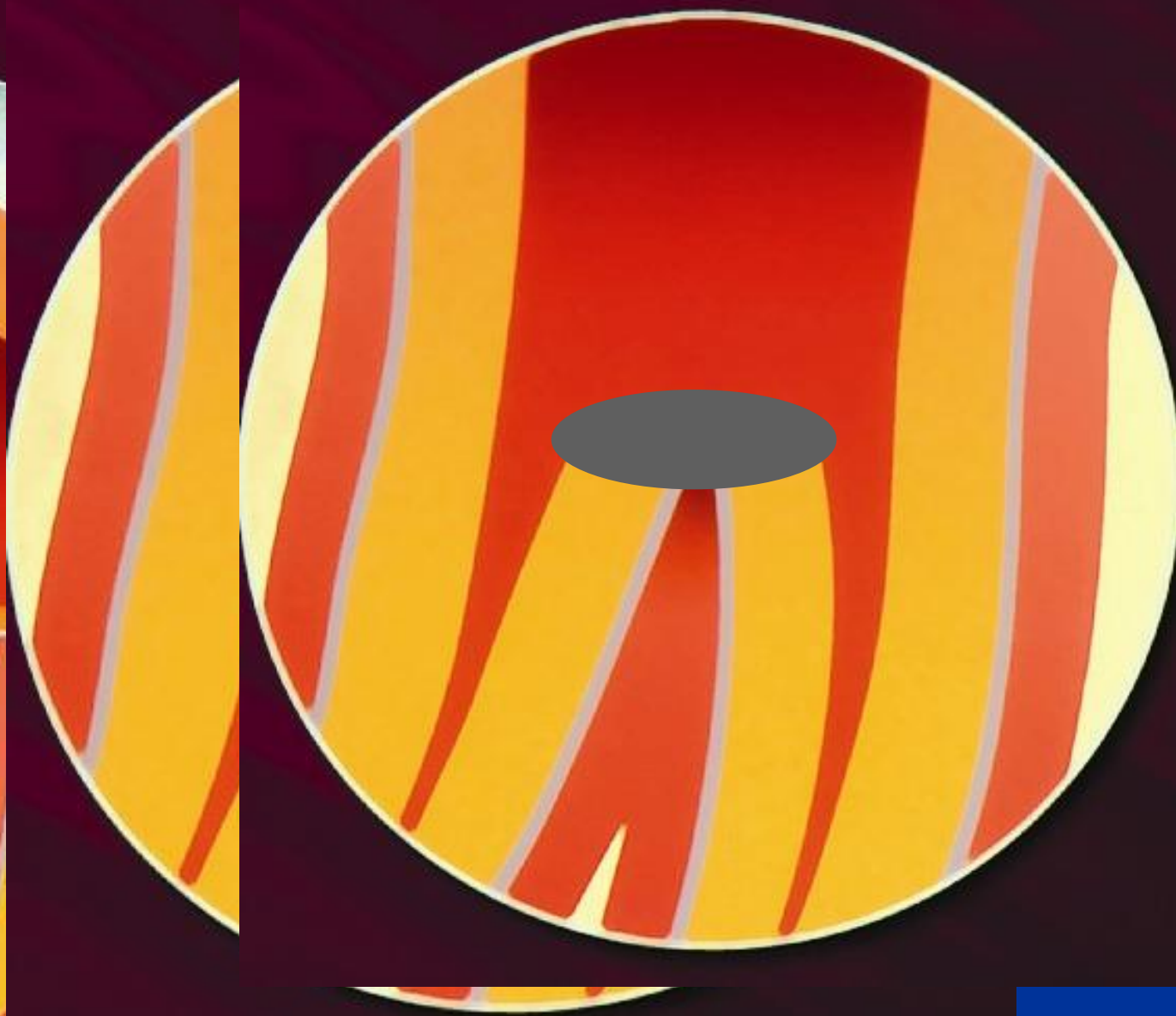
- Dicalcium silicate
 - Trikalcium silicate
 - Trikalcium aluminate
 - Tetrakalcium aluminate
 - Cuprum sulphate
 - Bismuthum trioxide
- = Portland cement

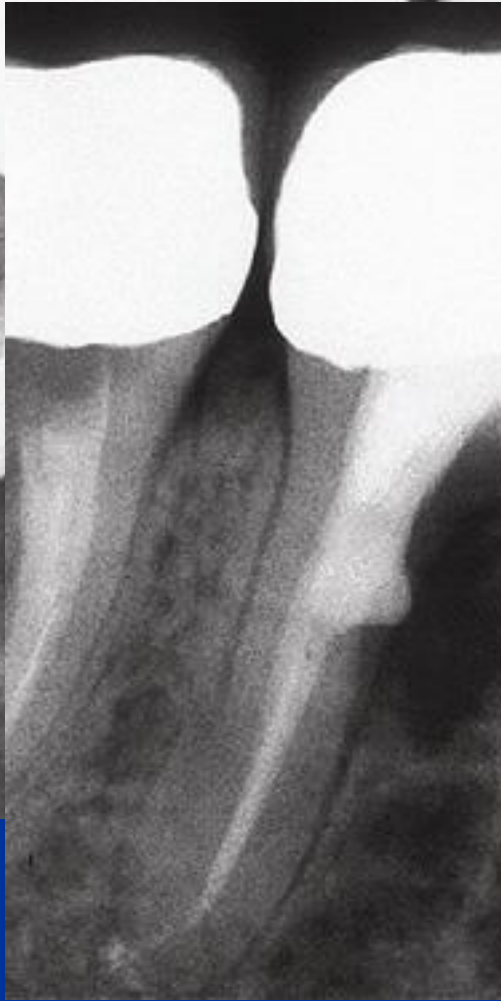


MTA

- Umožňuje hojení – dobrý okrajový uzávěr !
Zabraňuje přístupu mikroorganismům,
umožňuje hojení dřeně a periodoncia tvrdou tkání.







Via falsa - treatment

- No bleeding
- Desinfection
- MTA – moisture (wet cotton pellet)
- Calcium hydroxide
- Filling







Via falsa

- Perforace apikálně

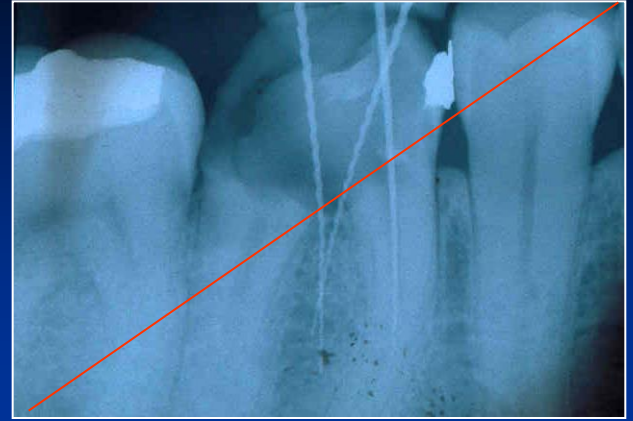
Hydroxid kalcia, kořenová výplň.



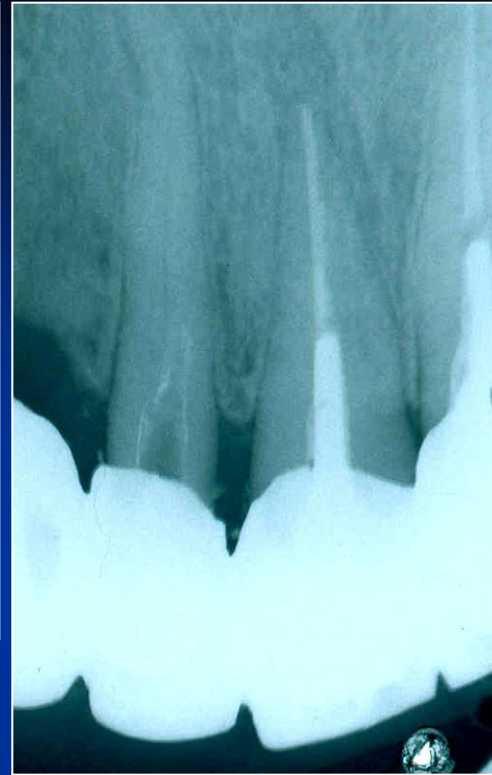
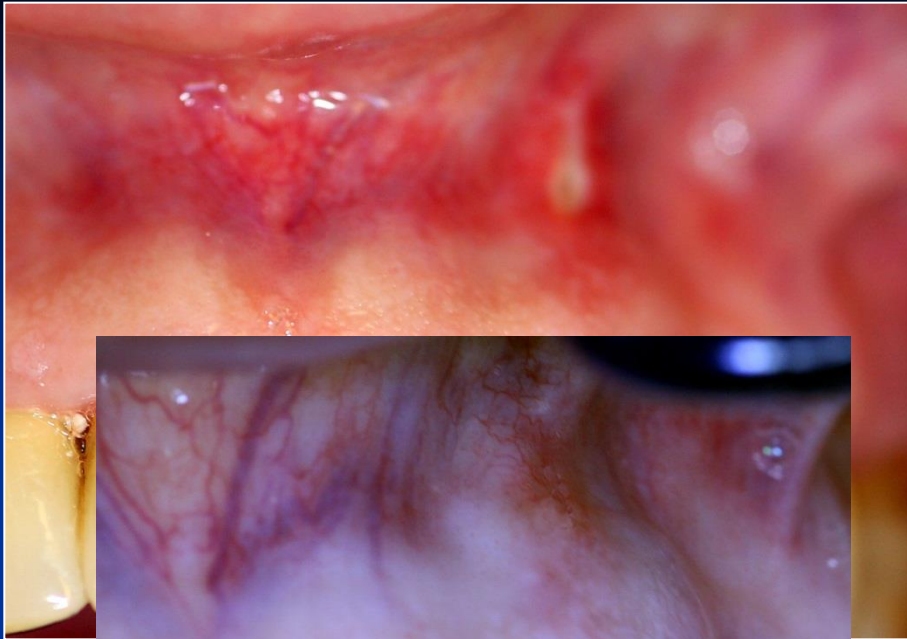
MTA

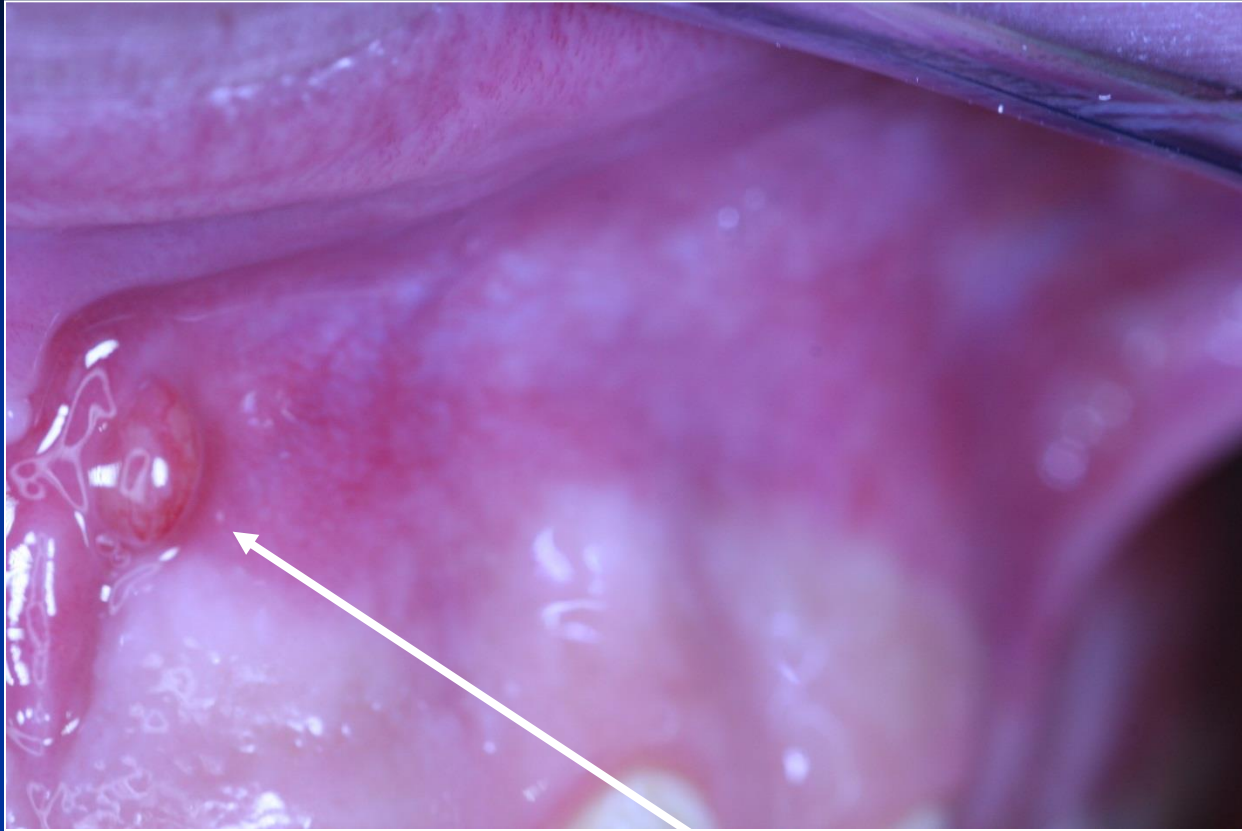
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umožňuje hojení dřeně a periodoncia tvrdou tkání.





Regional complications





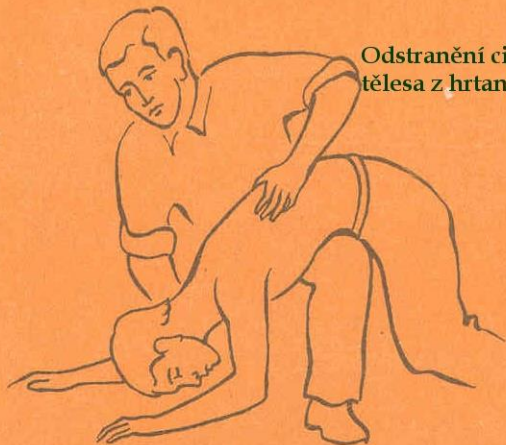
Píštěl

Systemic complications

Systemic complications

- Periostitis
- Inflammation of soft tissues (face, neck)
- Gulp of the instrument (X ray, remnant diet, information)- cough
- Aspiration of the instrument -emesis

**Odstranění cizího
tělesa z hrtanu**



**Stlačení hrudníku
ze stran**



Caution!

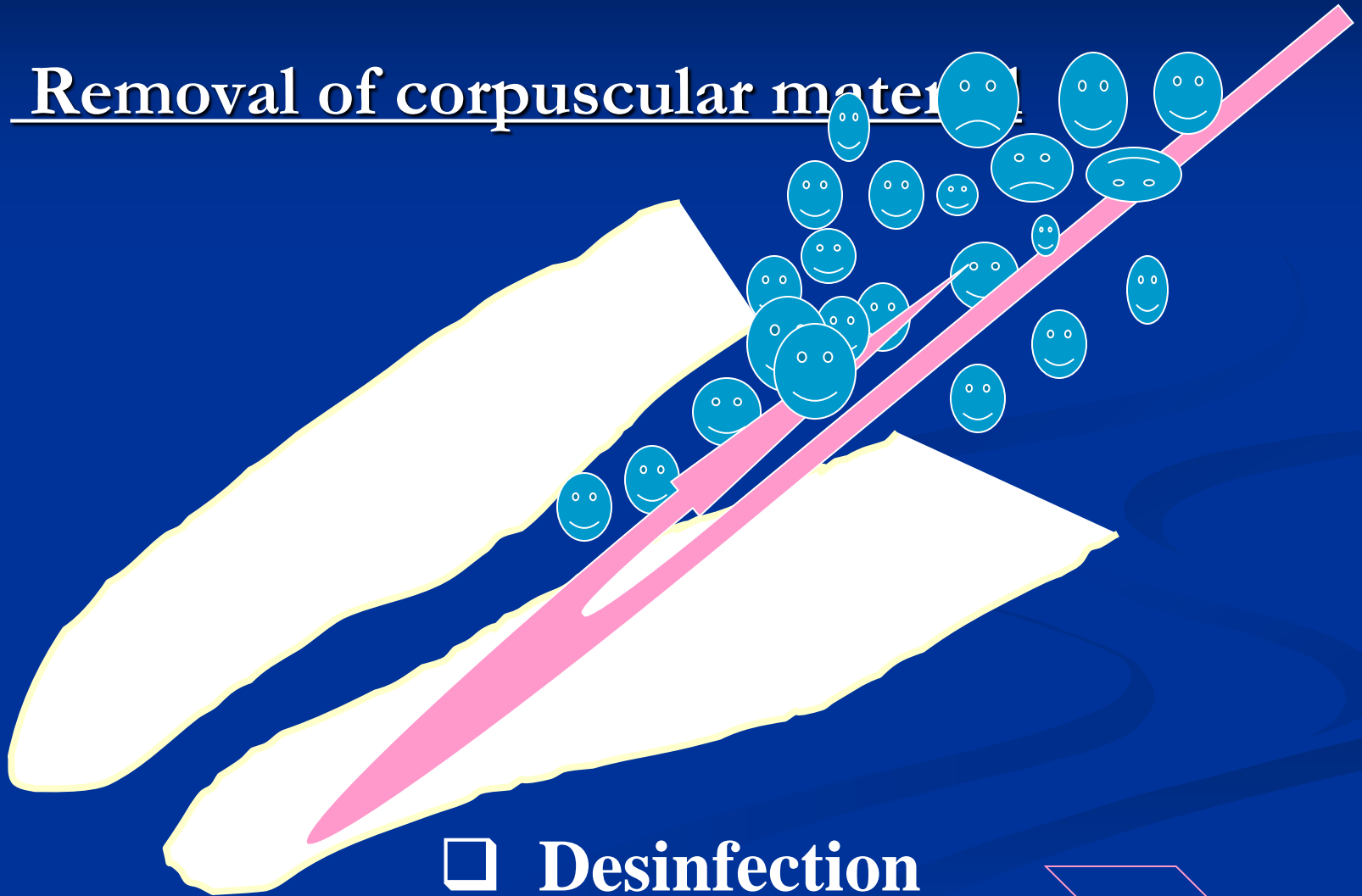
Always find the loss instrument !!!!!

Medicaments in endodontics

- Irrigants and lubricants
- Calcium hydroxide
- MTA
- Antibiotics and corticoids
- Disinfectants
- Agents for devitalization of dental pulp

Irrigation of the root canal

□ Removal of corpuscular material



□ Desinfection



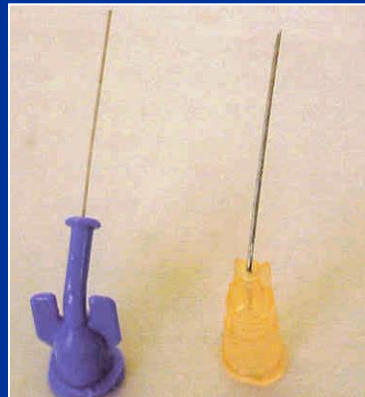
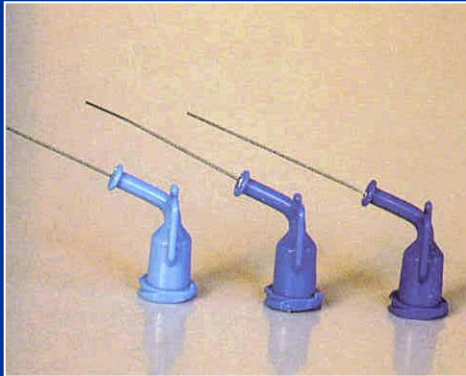
Irrigants

- Sodium hypochlorite (2% - 5.5%)
- Chlorhexidine 0,12 – 0.2%
- EDTA (17%)

Lubricants

- Gel EDTA, carbamide peroxide
- Sodiumhypochlorite

■ Cannula



Activation of irrigation

- Hand
- Ultrasound
- Hydrodynamic
- Laser

Disinfection

- Calcium hydroxide
- Antibiotics and corticosteroids

Calcium hydroxide

- Alkaline
- Antibacterial
- Stimulation of hard tissue formation
- Haemostatic and antiphlogistic

Calcium hydroxide

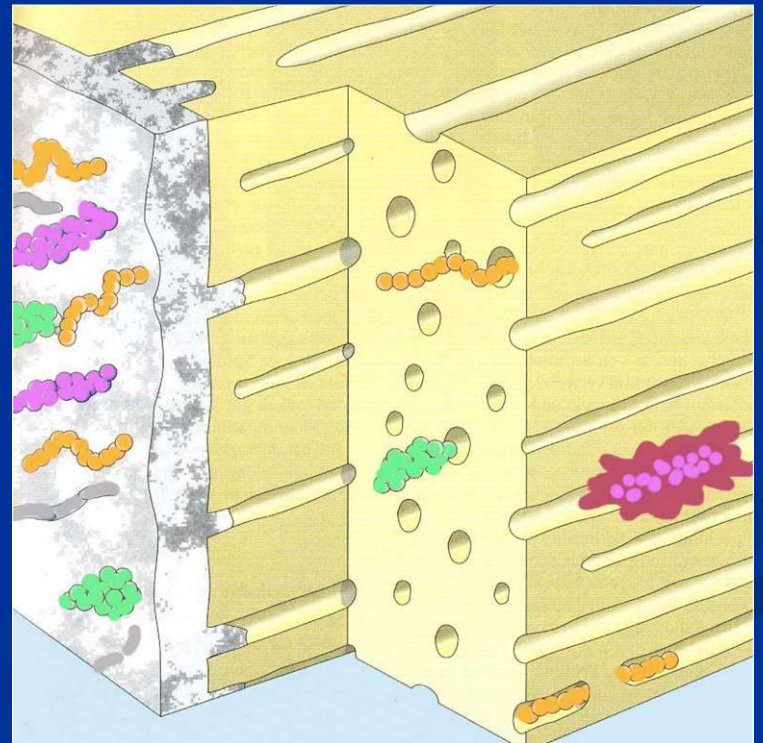
Temporary root canal filling

Subbase

Component of sealers



Dressing



Calcium hydroxide

- Short term action

1 – 2 weeks

Desinfection, haemostasis

Calcium hydroxide

- Middle term action

2 – 3 months

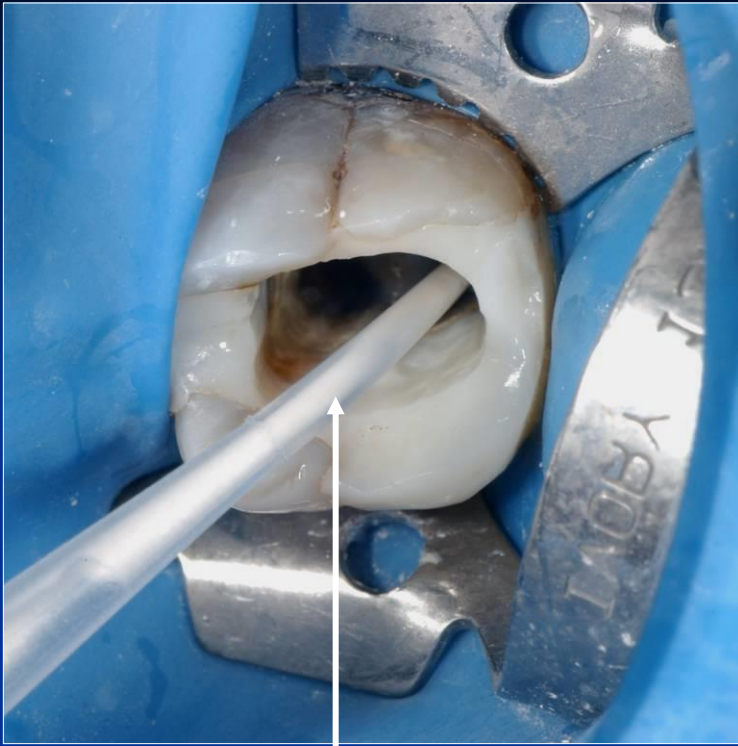
Apexification

Chronic form of apical periodontitis

Calcium hydroxide

- Long term action
3 months and more

Prevention of resorption



Magistraliter

The powder is mixed with distilled water



Lentule 2 mm less than WL !!!!



Apexit® Plus

ApexCal®

LOT 000724 EXP 0507

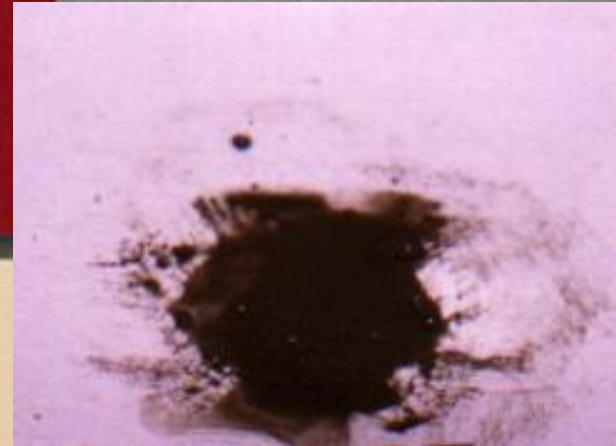
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Phenolic agents and aldehyds



Fenolické látky

Chlumského roztok

Chlorophenol kafr mentol (ChCM)

Chlorophenol kafr thymol

Iodoformová pasta

Aldehydy

Formaldehyd

Formokresol

Trikresolformalin

Caution!

Toxic, alergenick, mutagenick !!!!!

Antibiotics and corticoids

- Ledermix
- Septomyxin

*Antibiotics, corticoids, Zinoxid eugenol,
Paraformaldehyd
Exceptionally 1 -3 days.*

Agents for devitalization

- They causes necrosis of dental pulp

As₂O₃

Cobalt paste

Parafphormaldehyd paste (Depulpin, Caustinerf)