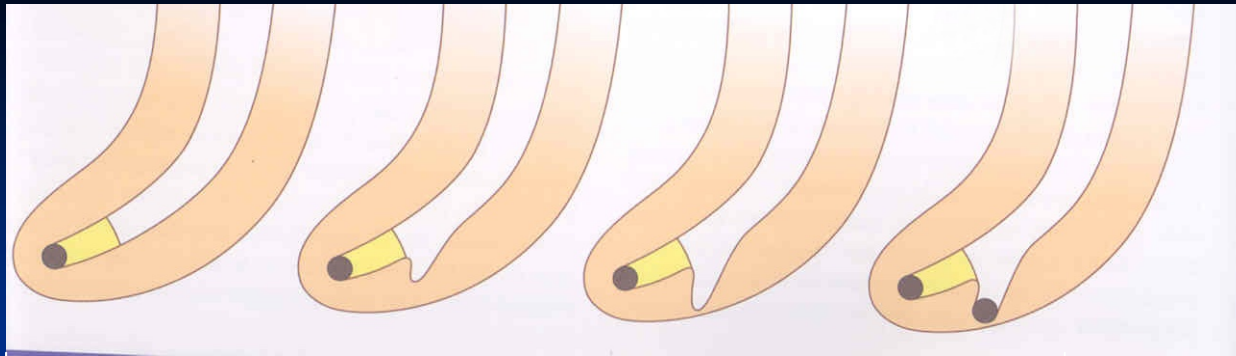


Complications of endodontic treatment

Local

Regional

Systemic



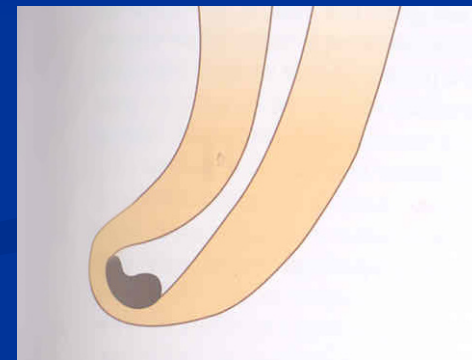
Plug of
dentin chips

Ledging

Transportation of the root canal

Via falsa

Zippering a elbow



Local complications

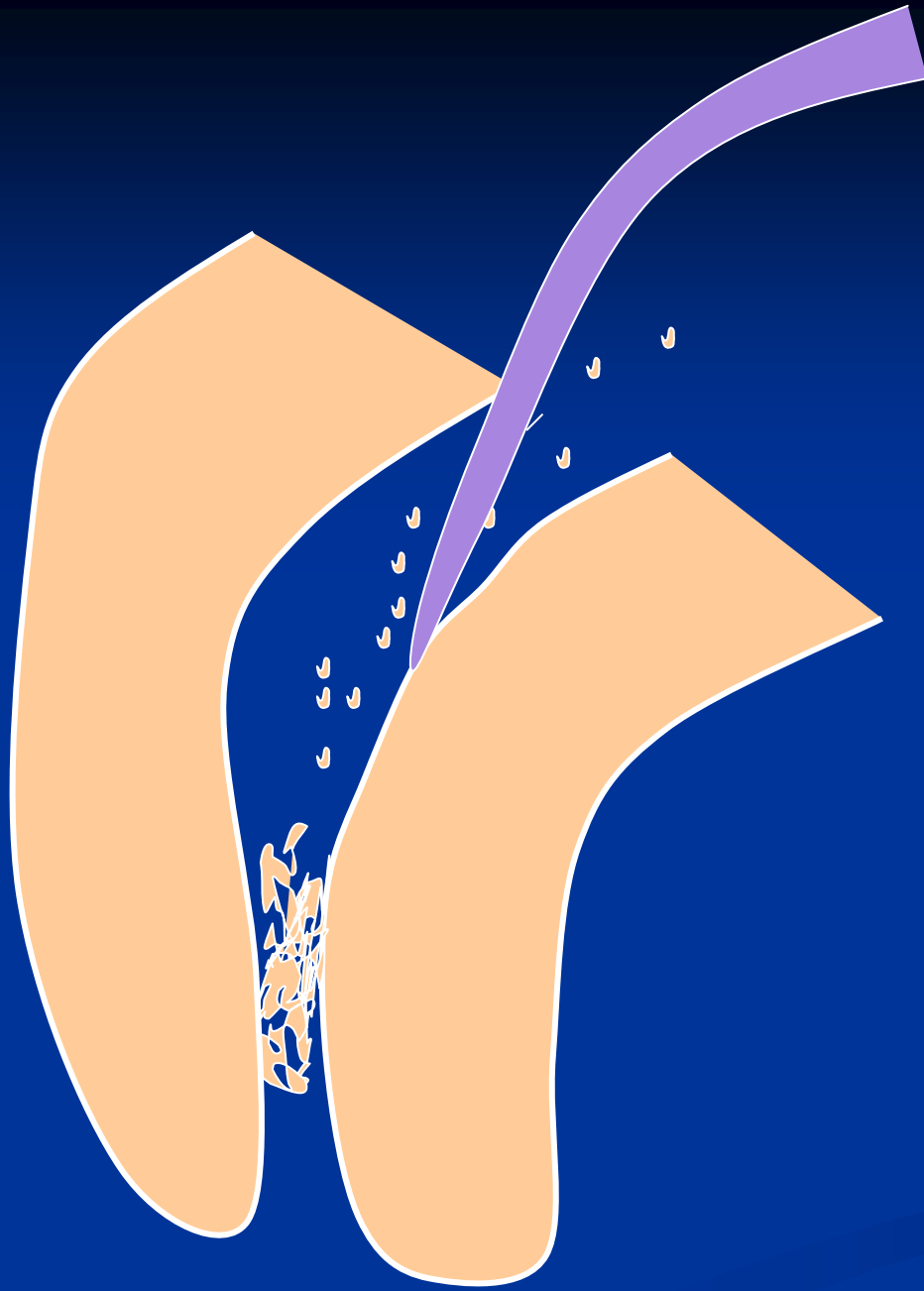
Plug



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

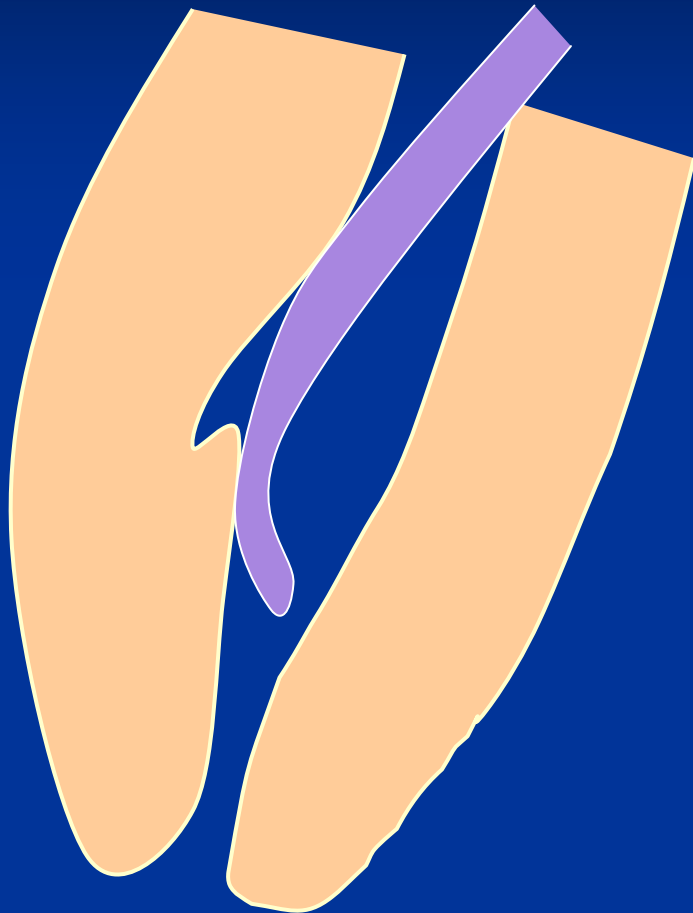
Reasons

The instrument is not bended in advance!

No control of the WL

=

No recapitulation Loss of the WL



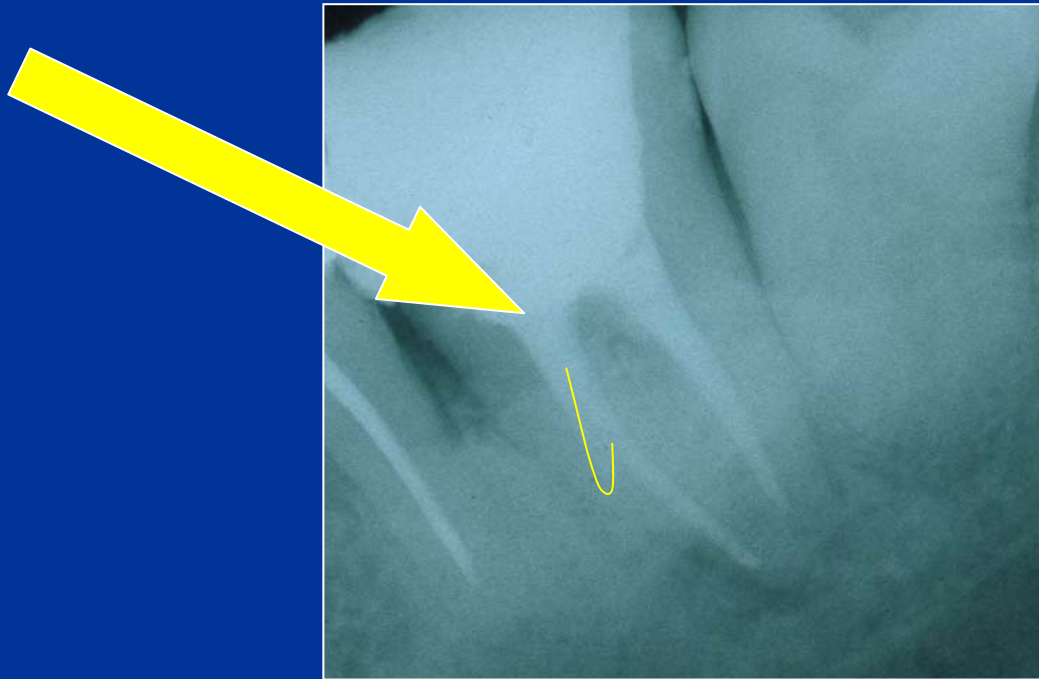
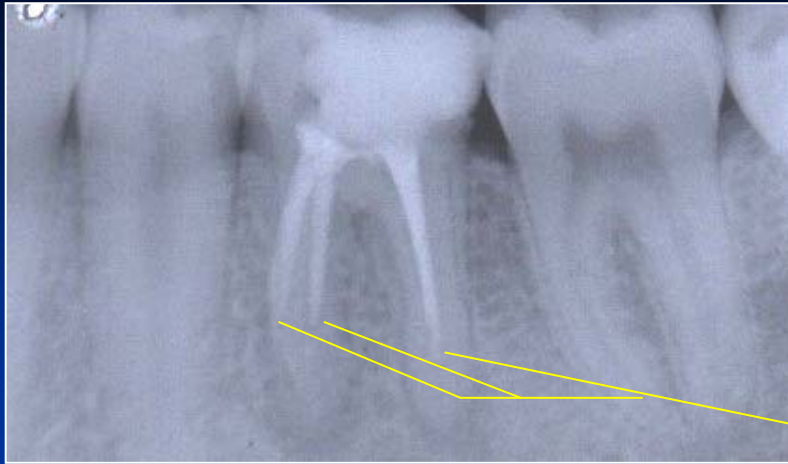
Solution

The instrument must be
bended in advance

Careful but complete rotation

Finishing with the fine filing

No NiTi!!!



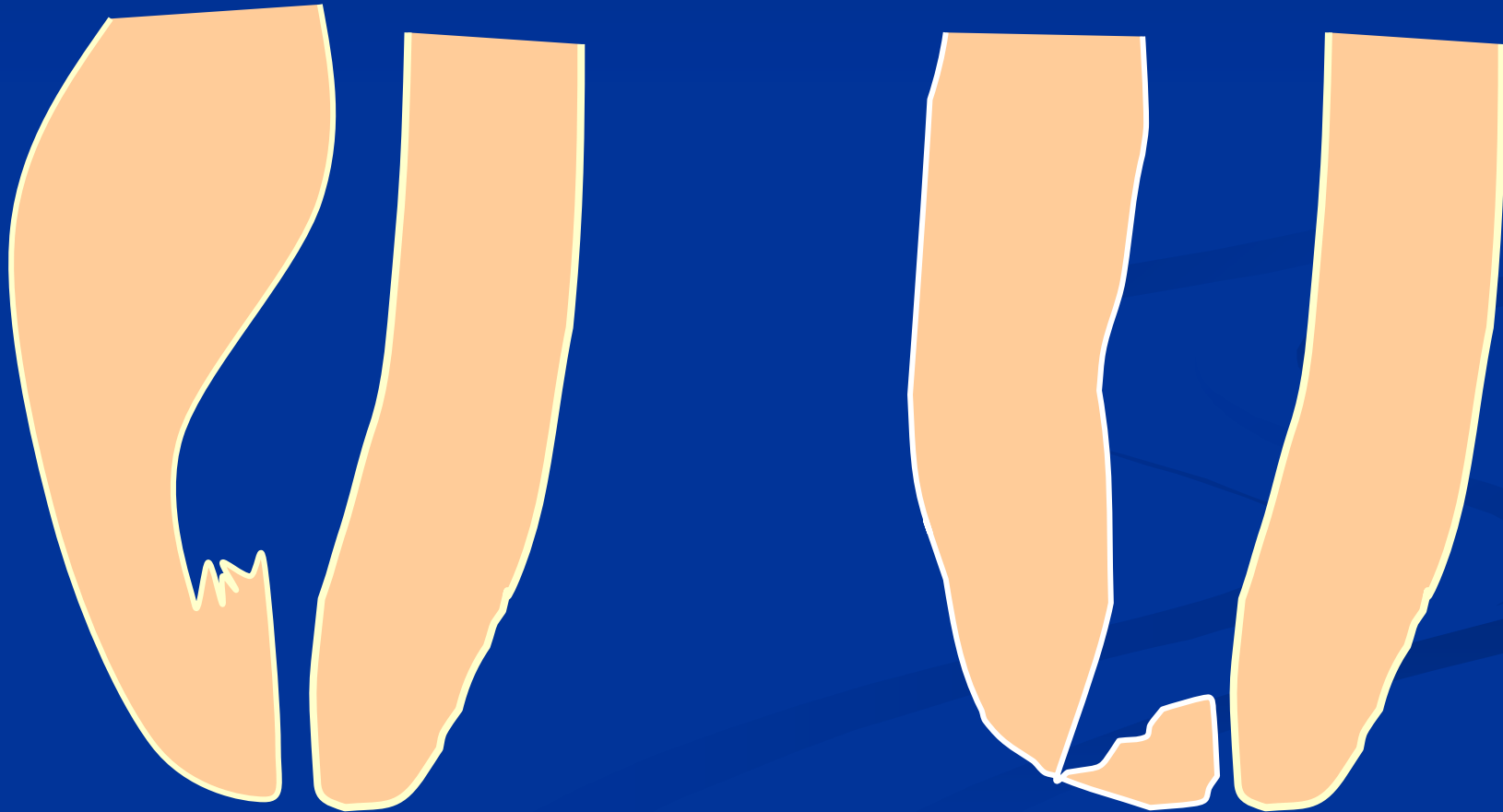
Ledging

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

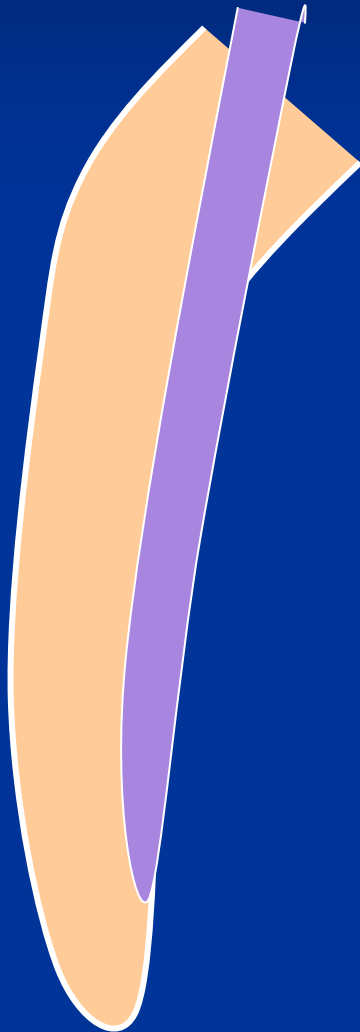
Dangerous zones

Mandibular molars – mesial roots

Premolars, esp. maxillar

Mandibular incisors

Oblast isthmu



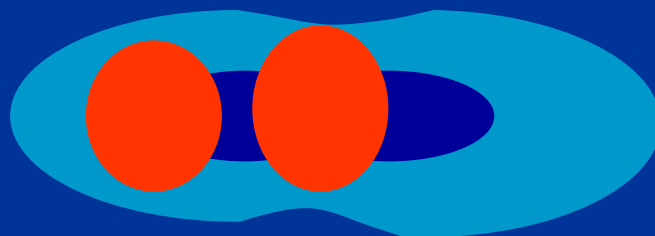
Stripping

Důkladný přehled!

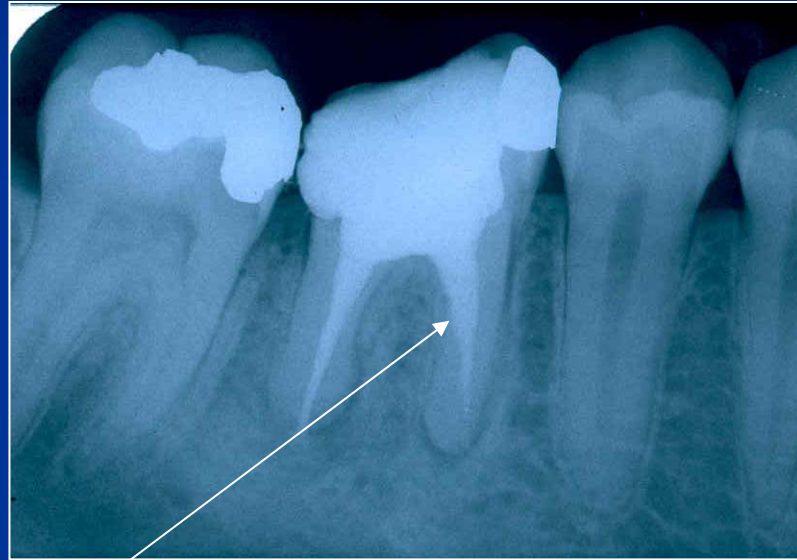
Šetřit oblast isthmu!

Ruční preparace!

Menší kónus NiTi !



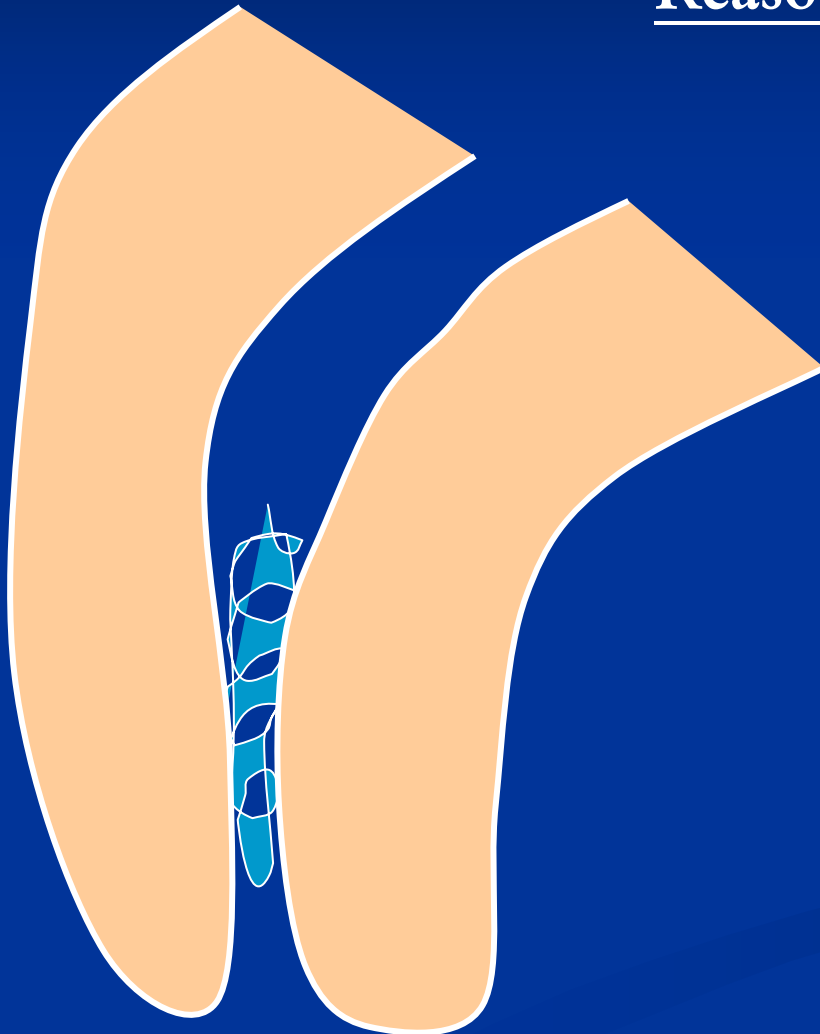
Stripping



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

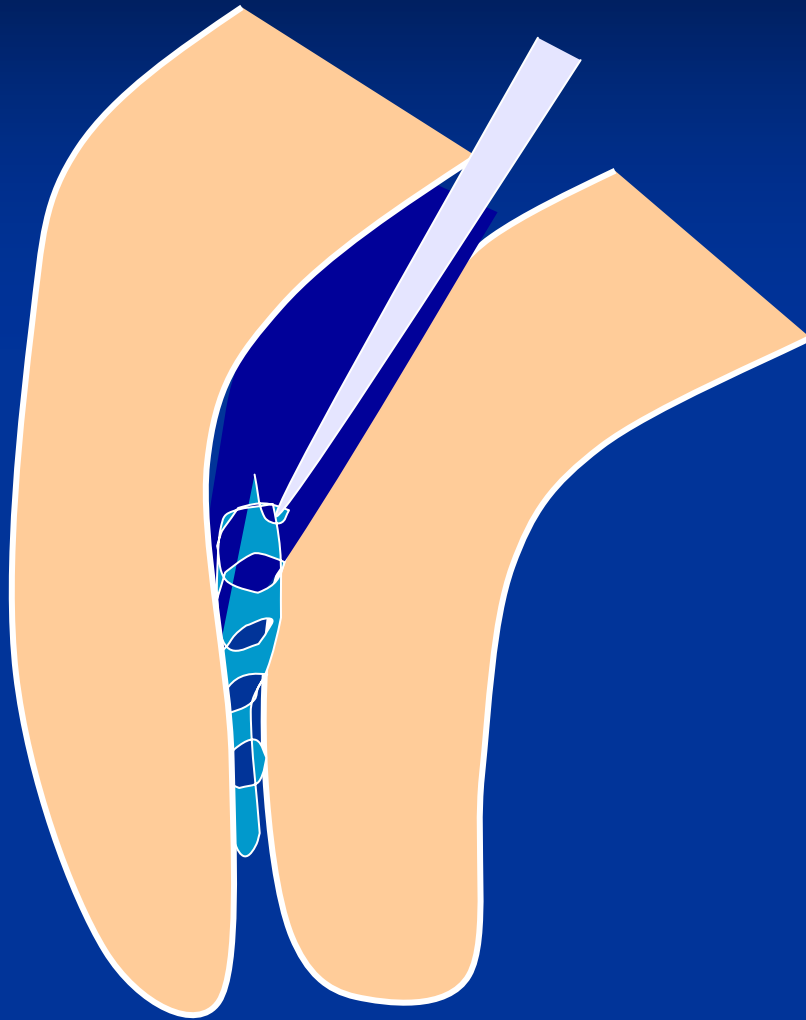
Ultrasound tips

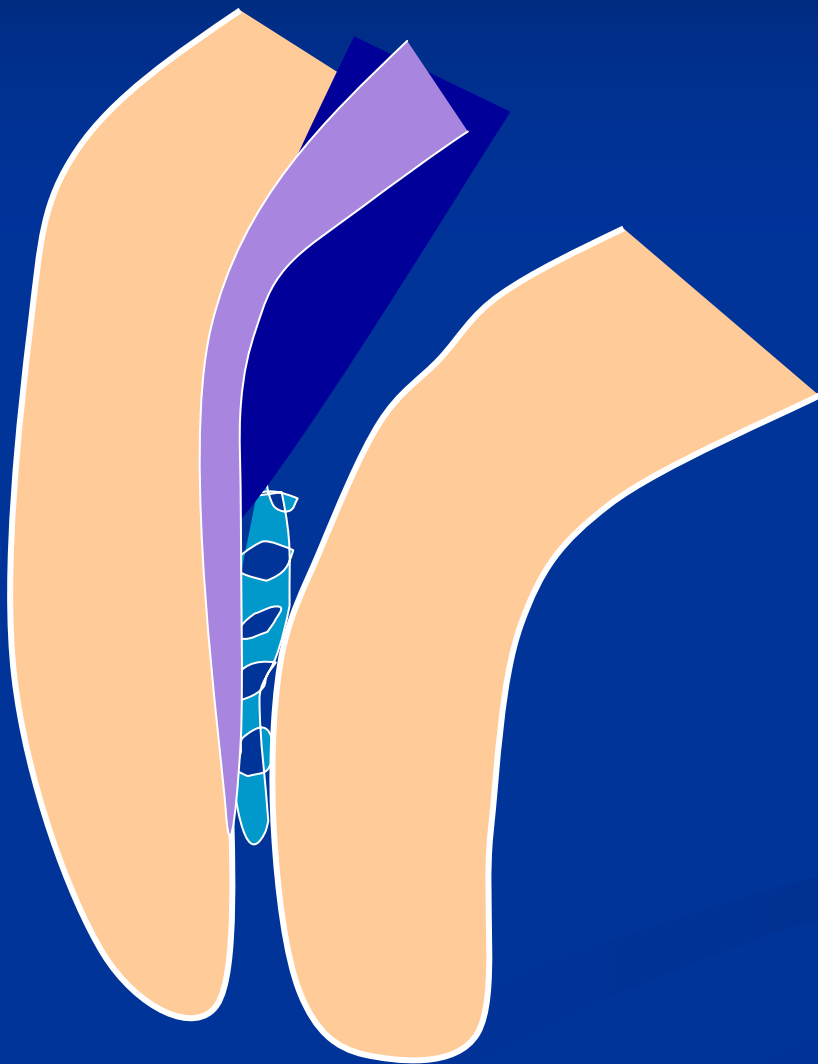
Rotating root canal
instrument –
caution!

Bypass

Leaving in

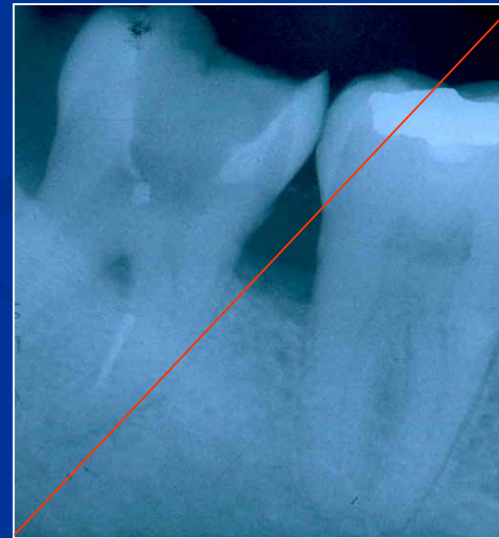
Surgical treatment





Bypass

Fractured instrument

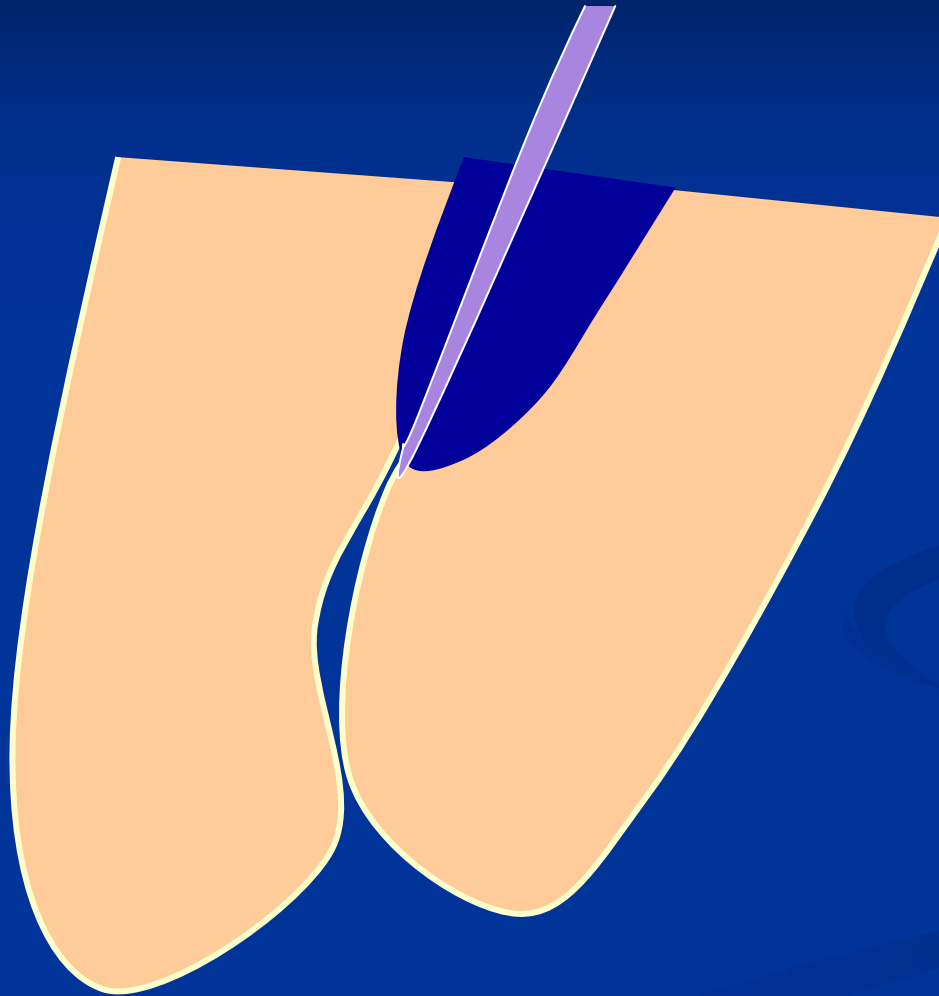


Obliteration



Partial

Obliterate



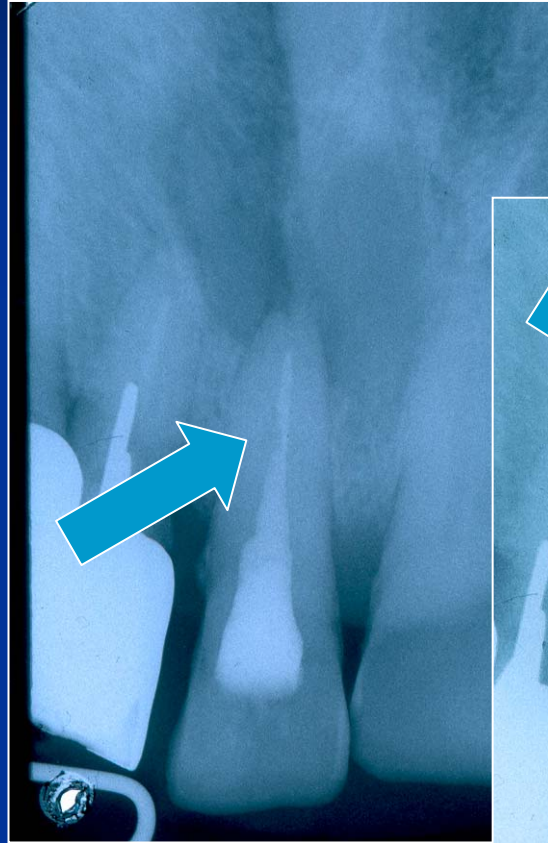
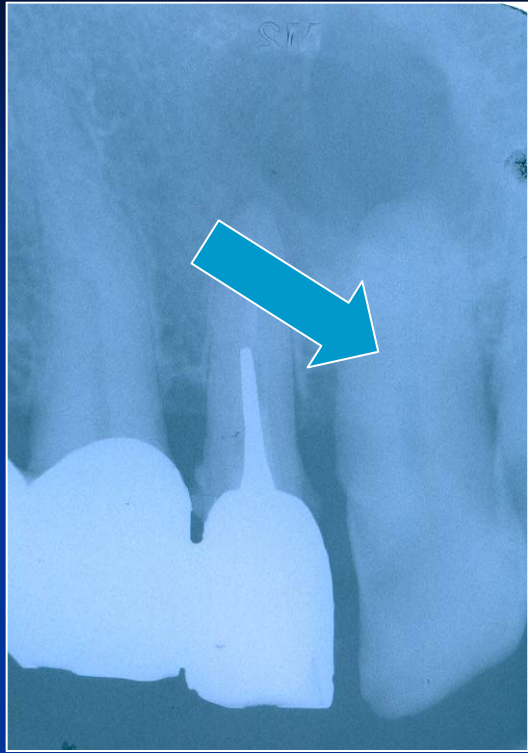
Access!!!

Hand thion
Instrument!

Steel or NiTi

EDTA

Patience

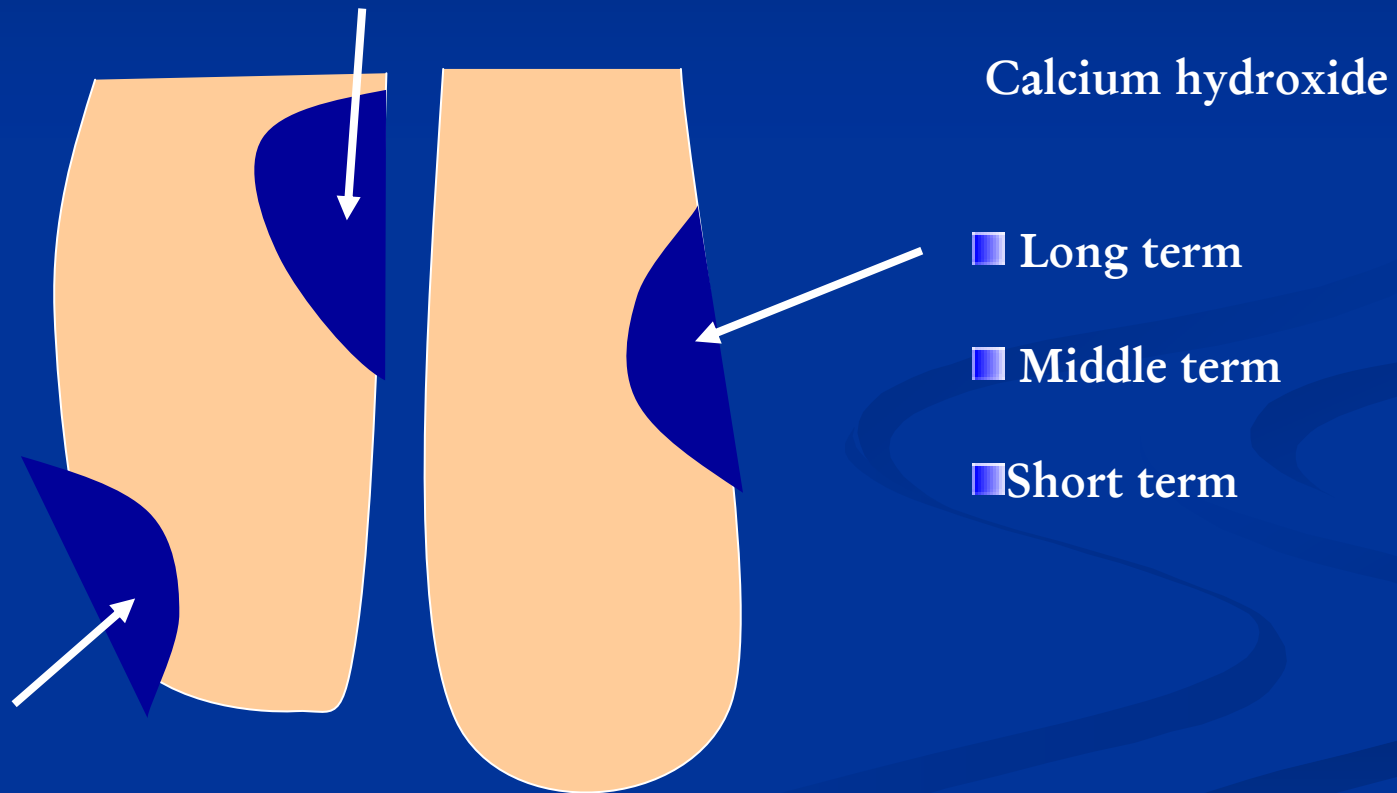


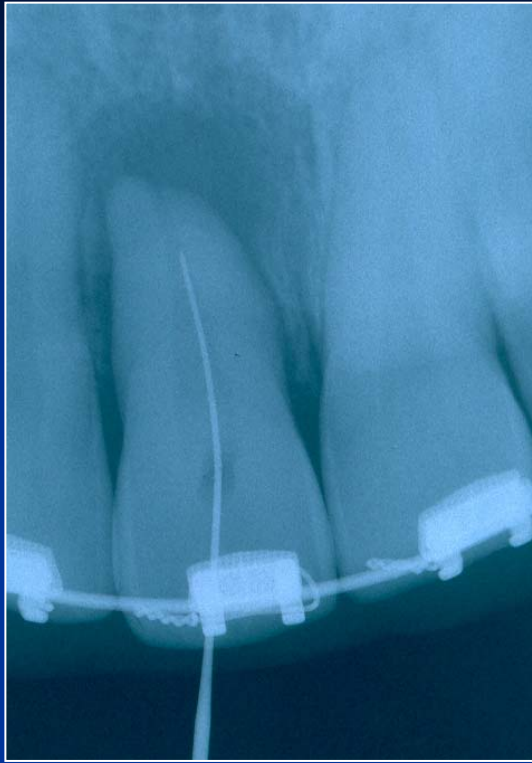
Obliterace

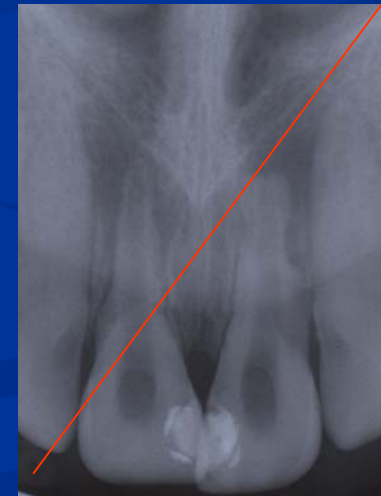
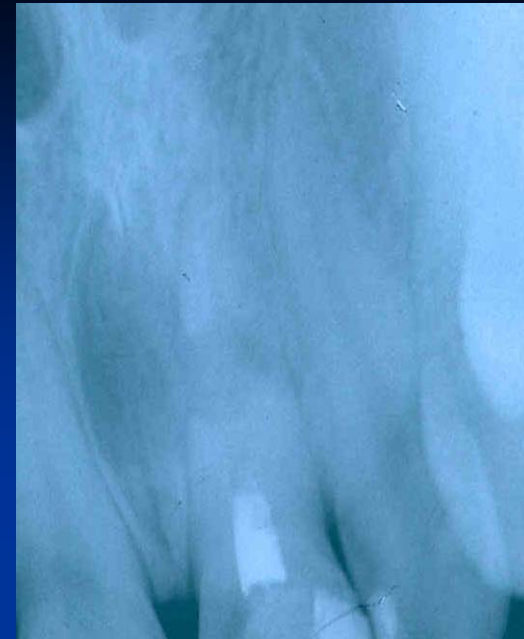
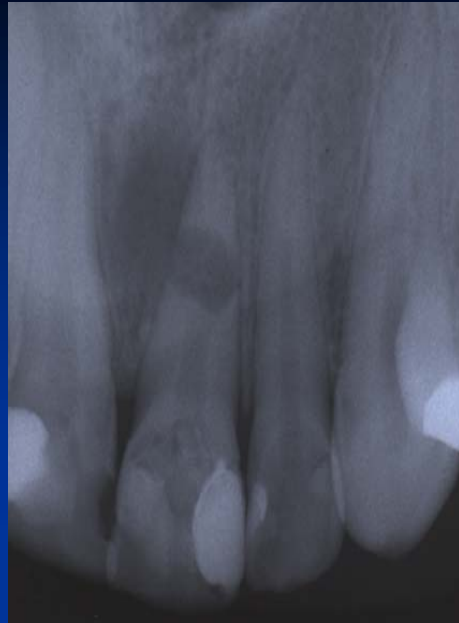


Úplná -
ponechat.

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

LOT 000724 EXP 0307

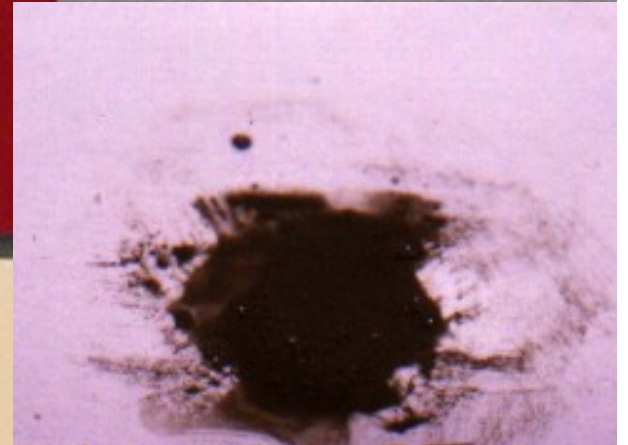
DENTSPLY

PRO ROOT™

MTA (Mineral Trioxide Aggregate)
Root Canal Repair Material

Contents: 1 gram (1 treatment)

CE
0120



MTA composition

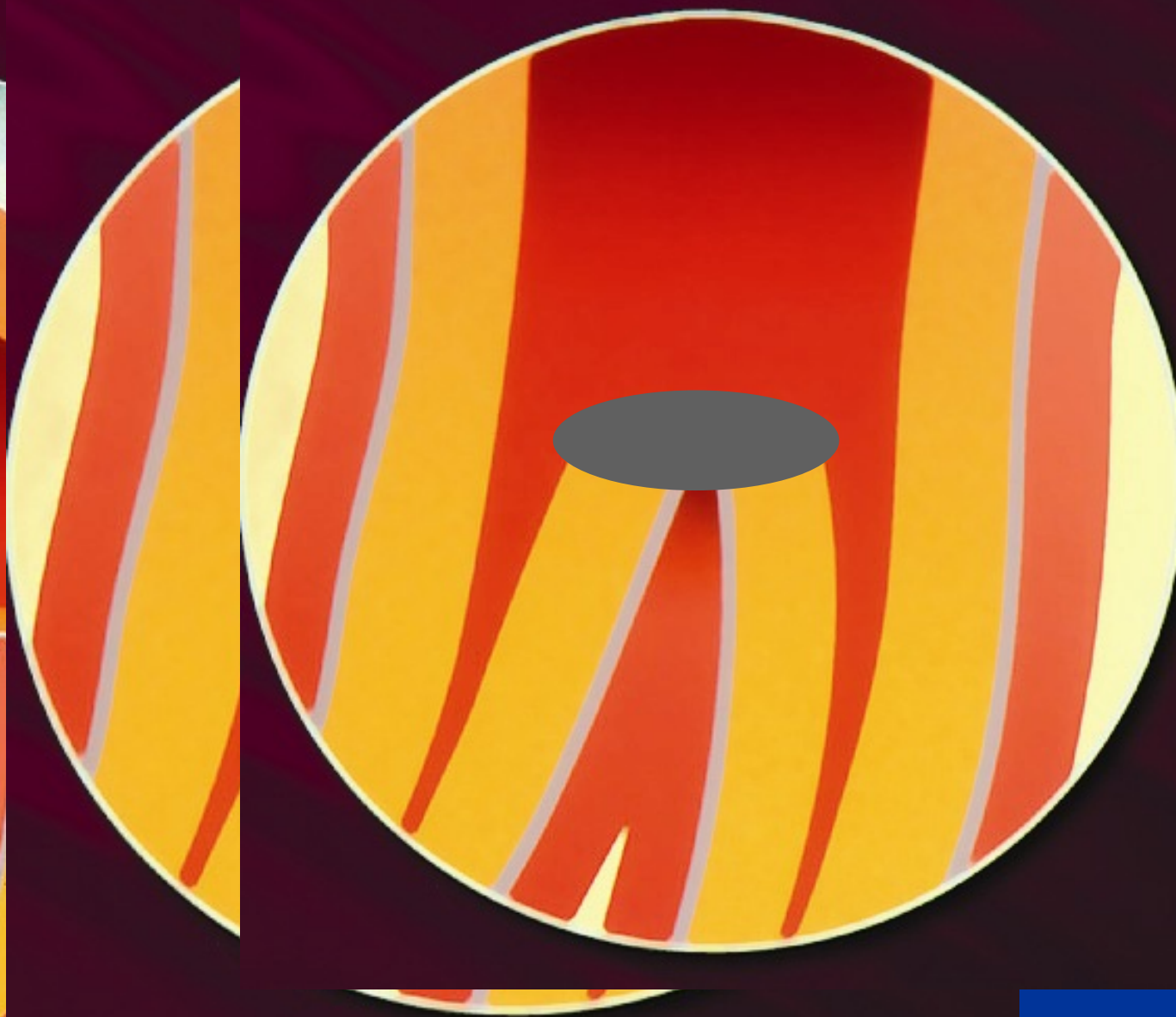
- Dicalcium silicate
 - Trikalcium silicate
 - Trikalcium aluminate
 - Tetrakalcium aluminate
 - Cuprum sulphate
 - Bismuthum trioxide
- = Portland cement

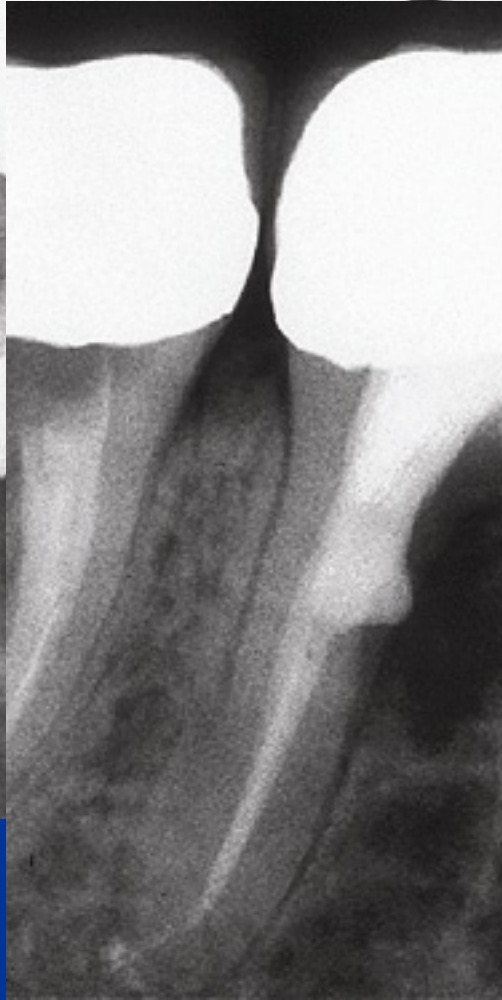


MTA

- 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

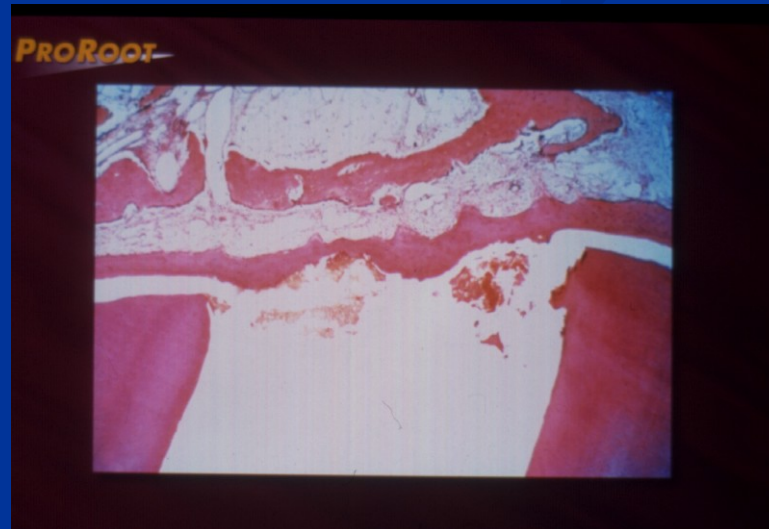
- Perforace apikálně

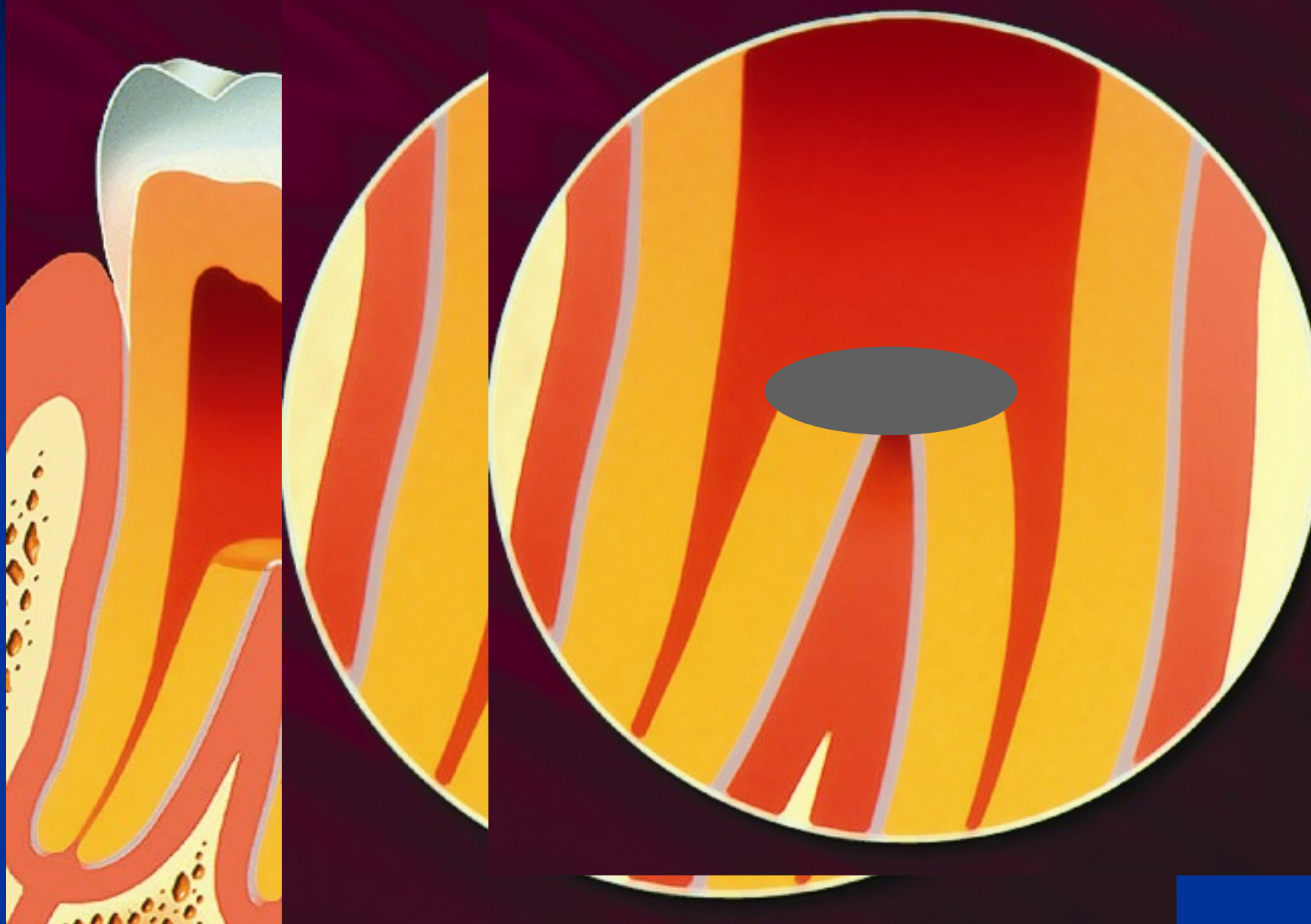
Hydroxid kalcia, kořenová výplň.



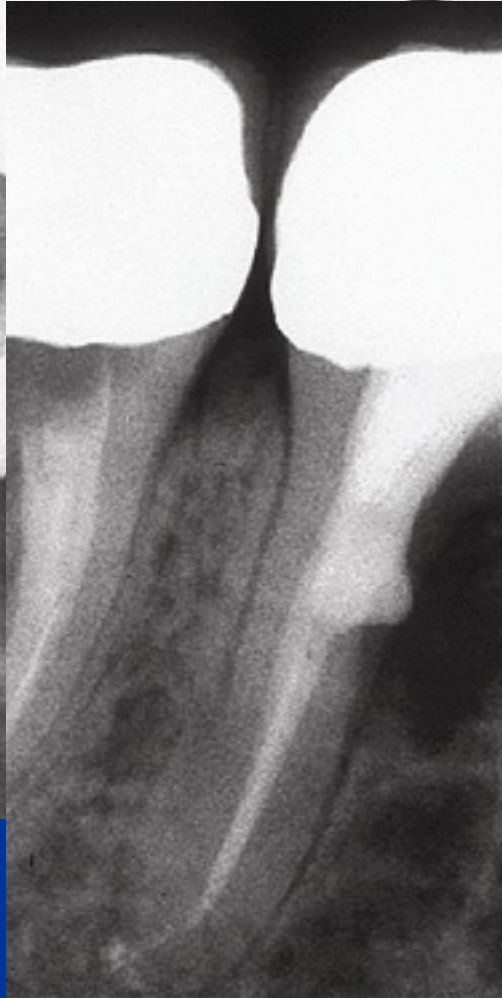
MTA

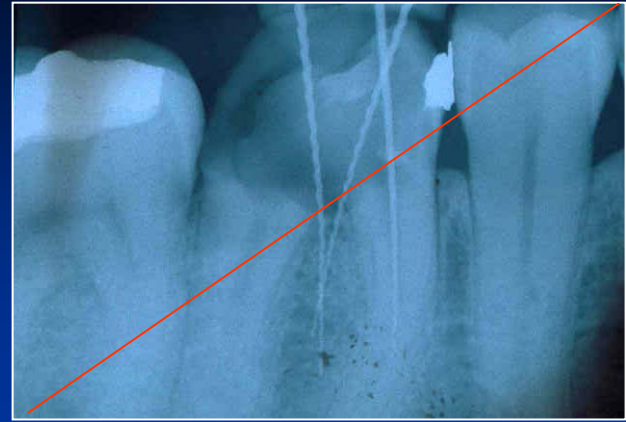
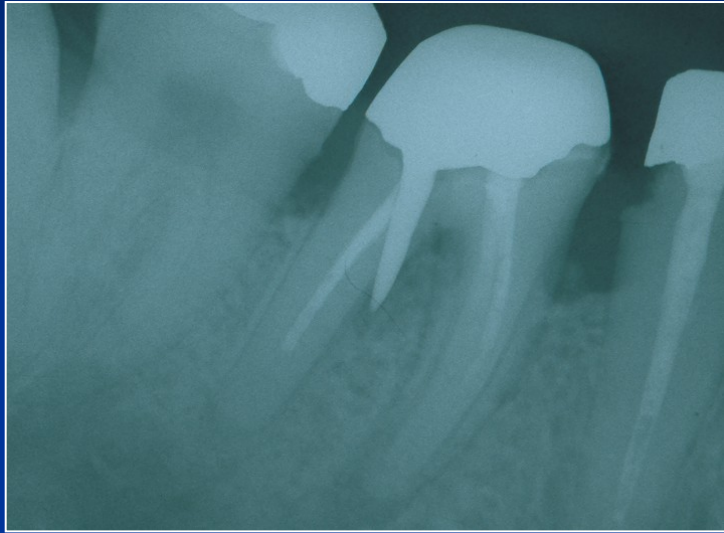
- Umožňuje hojení – dobrý okrajový uzávěr !
Zabraňuje přístupu mikroorganismům,
umožňuje hojení dřeně a periodoncia tvrdou
tkání.



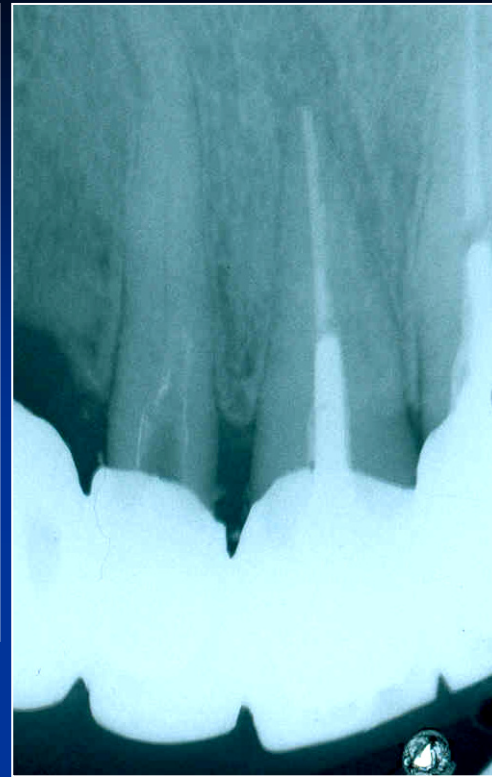
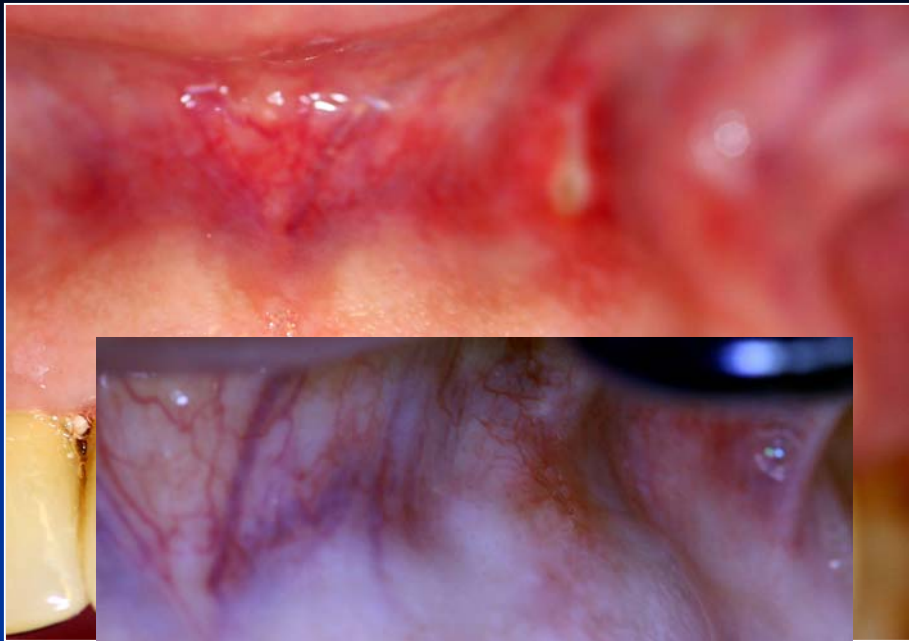


Zdroj: Manuál firmy Maillefer





Regional complications





Píšťel

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

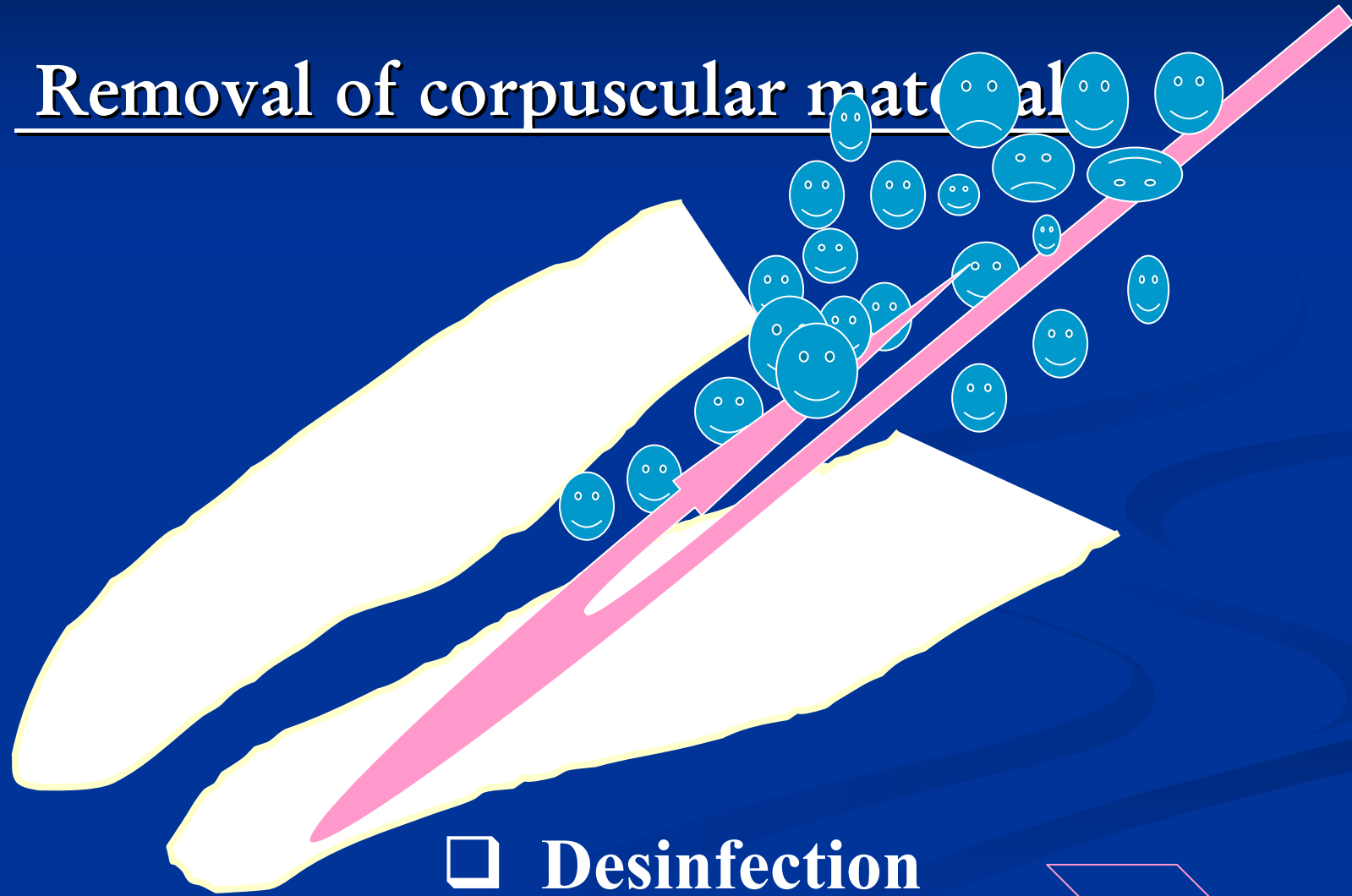


Caution!

Always find the loss instrument !!!!!!

Irrigation of the root canal

□ Removal of corpuscular material



□ Desinfection

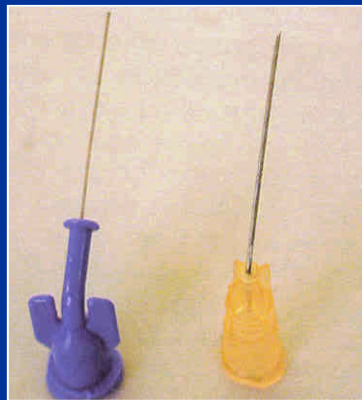
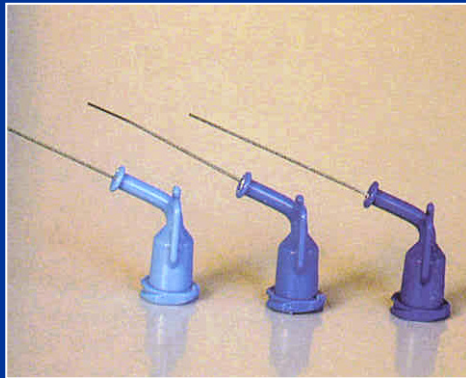


Výplachové roztoky

- ✓ Natrium hypochlorite – 0,5% – 5,25%
(1% - 2%)
- ✓ Chlorhexidin (0,12 – 0,2%)
- ✓ EDTA 17% solution or lubrication gel
- ✓ ~~Hydrogen peroxide 3%~~
- ✓ ~~Peracetic acid – 1%~~



■ Cannula



Activation of irrigation

- Hand
- Ultrasound
- Hydrodynamic
- Laser

Desinfection

➤ Calcium hydroxide

➤ Antibiotics and corticosteroids

Calcium hydroxide

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

Calcium hydroxide

Temporary root canal filling

Subbase

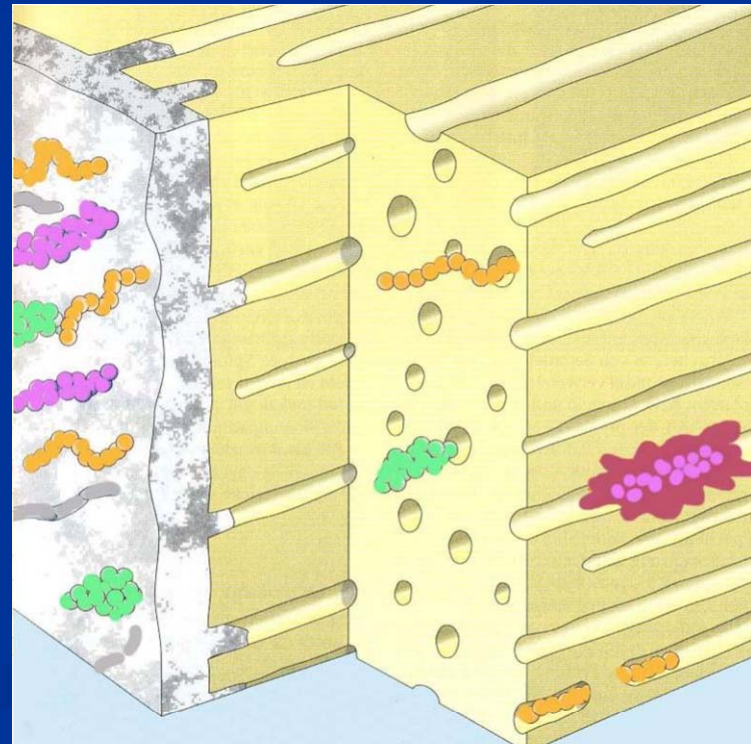
Component of sealers

Mode of action

- Release of hydroxyl ions
- Long term alkalization
- Stimulation of hard tissues formation



Dressing



Calcium hydroxide

- Short term action

1 – 2 weeks

Desinfection, haemostasis

Calcium hydroxide

- Middle term action
2 – 3 months

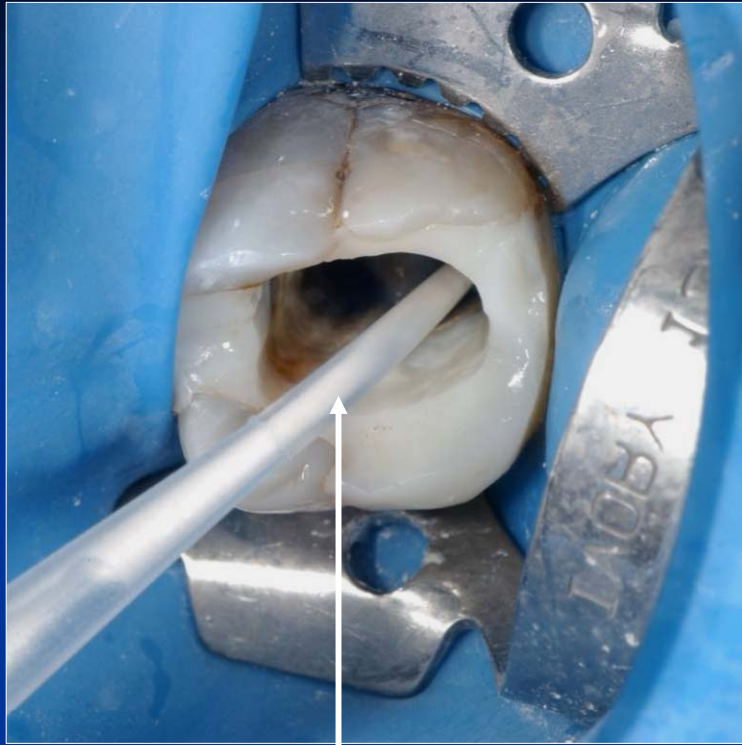
Apexification

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®