

ENDODONTIC TREATMENT IN PRIMARY DENTITION

□ Pulp diseases



□ **Acute** pulpitis in younger age (ppt)



□ **Chronic** pulpitis at high age (pcr)



□ **Reversible** pulpitis (asymptomatic):
reduced or absent pain

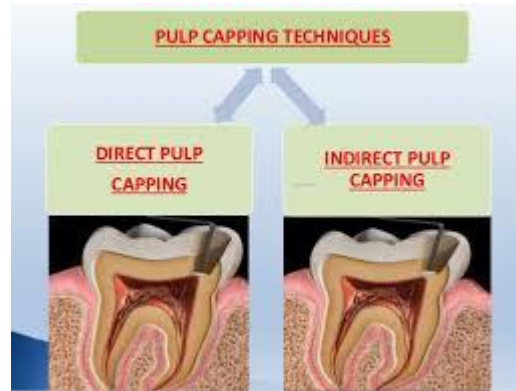


□ **Irreversible** pulpitis (symptomatic):
pains of greater intensity, persistent,
spontaneous

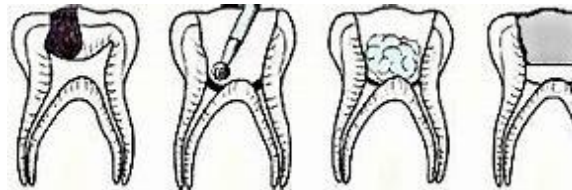
- ▶ *Diagnosis of pulp diseases in temporary teeth is difficult to determine both because of the hard collaboration with the small patient during the anamnesis and because of the poor and uncontrolled clinical symptomatology with histopathological changes.*
- ▶ The main symptom is **PAIN**, which generally has the following features:
 - is **erased**, some forms of pulpitis can develop without pain (almost all chronic forms);
 - is **unstable** (disappears or appears easily);
 - is **imprecise**, unlocalized - the causal tooth is sometimes established with difficulty, especially in patients with multiple caries on the same hemiarch.

PROCEDURES OF PULP PROTECTION

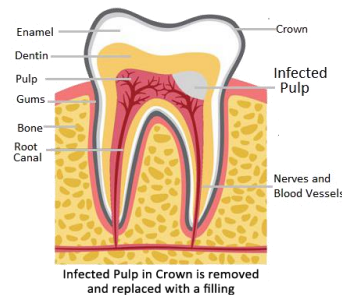
1. Direct pulp capping
2. Indirect pulp capping



3. Pulpotomy



4. Pulpectomy



TREATMENT selection criteria

- **Physiological state of PT:**

- PT imature: pulp capping, pulpotomy
- PT mature: any method of treatment
 - PT old: extraction

- **Age and degree of cooperation:**

- Small, uncooperative child: pulp capping
- Bigger child, cooperative: any method

TREATMENT selection criteria

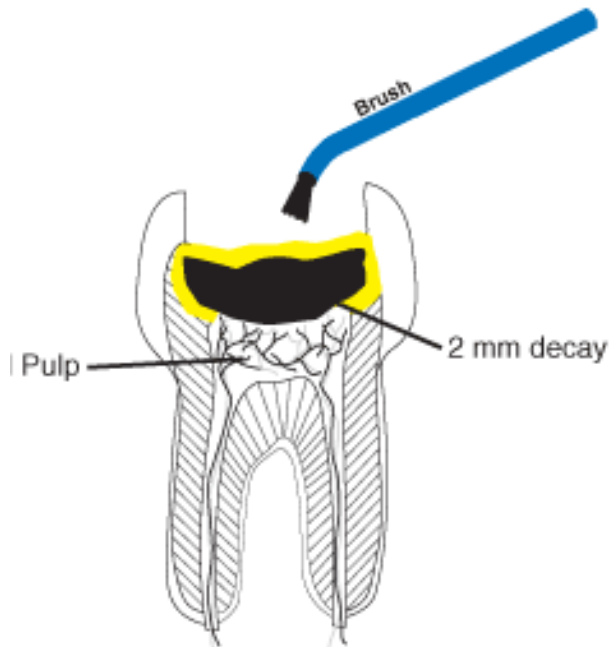
- Degree of coronary destruction:
 - DC > 2/3 → compromise / extraction
 - DC < 2/3 → any met. for treatment
- Degree of difficulty of pulp therapy and pulp diagnosis



INDIRECT PULP CAPPING

Indications:

- Large carious lesion;
- Asymptomatic tooth or mild transient symptoms;
- Preoperative radiograph confirms the absence of radicular pathology.



DIRECT PULP CAPPING

The process involves the application of a "drug" directly at the level of pulp exposure in order to maintain the pulp vitality.



- ▶ **INDICATIONS** - Pulp exposure < 0.5-2 mm

Mechanics:

- ▶ during cavity preparation;
- ▶ during the excavation of soft-witted dentin;

Recently trauma;

Teeth without spontaneous pain.

- ▶ **CONTRAINDICATIONS**

Pulp exposure through massive caries lesions;

Excessive bleeding at exposure level;

Exposure without bleeding;

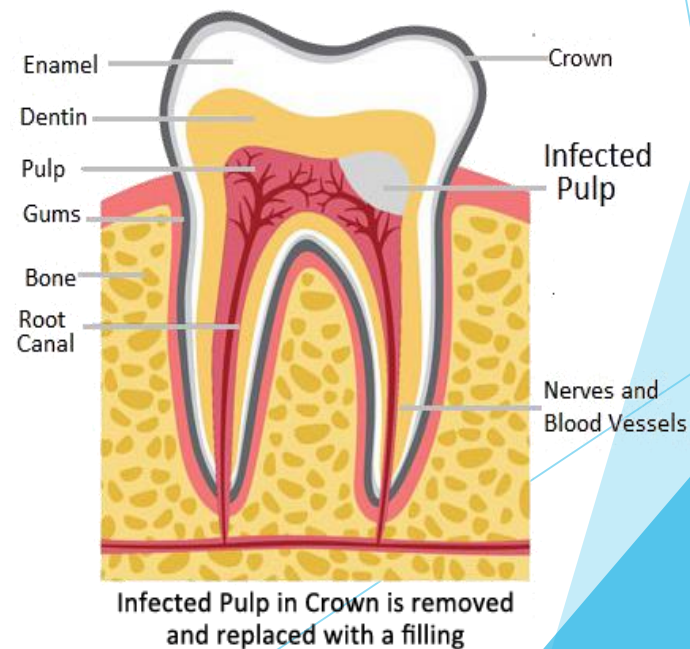
Pulp exposure with purulent secretion elimination;

Radiological changes of:

- ▶ Periodontal disease;
- ▶ Resorption;
- ▶ Calcification.

PULPOTOMY

"Surgical" removal of the coronary pulp, aimed at maintaining the pulp's vitality and relieving pain in patients with acute pulpal pain.



INDICATIONS

- deep dental caries
(more than half the
dentine thickness);

conditions:
asymptomatic tooth
or moderate
transient pain;

tooth without apical
pathology;

tooth that can be
restored;

- accidental
discovery of the
pulp;

- tooth requiring
coronary
remodeling due to
malocclusion,
significant abrasion;

- Pulp exposure
through trauma
(Emergency).

CONTRAINDICATIONS

- indication of
pulpectomy or
extraction

A tooth that
cannot be
restored;

Primary
tooth stage
III;

Teeth with
spontaneous
pain;

Perio
diseases;

Non-
Bleeding
pulp;

excessive
bleeding

secretions;

fistula.

DENTAL MATERIALS USED IN PULPOTOMY



PULPOTOMY WITH BIDENTINE

- ▶ Produced by Septodont, 2009
- ▶ It has been designed as a dentine replacement material based on silicate-based calcium
- ▶ It is made up of powder and liquid

Powder:

- ▶ tricalcium silicate
- ▶ Dicalcium silicate
- ▶ Calcium carbonate
- ▶ Iron oxide
- ▶ zirconium

Liquid:

- ▶ Hydrosoluble polymer
- ▶ The water

socket → 9-12 min

releases Ca ions

radiopaque

resistant to corrosion



- ▶ similar to dentine hardness
- ▶ color stability
- ▶ insoluble
- ▶ good marginal integrity
- ▶ biocompatible
- ▶ antibacterial properties
- ▶ statistically the success rate > MTA



LASER PULPOTOMY



- ▶ to non-symptomatic temporary teeth → almost 100%
- ▶ optimal bleeding control
- ▶ improving healing
- ▶ stimulation of dentinogenesis
- ▶ vital pulp conservation
- ▶ the laser → allows the cavity to open sterilely
- ▶ laser → its sterilization and coagulation ability is particularly relevant
- ▶ laser sterilization strengthens the general sterilization procedure,
- ▶ laser coagulation produces a thin necrotic layer over the vital residual paste.
- ▶ the vital pulp responds, in some cases, to the formation of a dentine bridge.

PULPECTOMY

PULPECTOMY =
complete removal of
the coronary pulp and
root.

CANAL TREATMENT =
root canal obstruction
with biocompatible
materials after pulp
was removed.

INDICATIONS:

- Irreversible pulp inflammation as a result of caries or dento-periodontal trauma;
- Failure after pulpotomy;
- A healthy child who accepts anesthesia;
- RR low (1/3);
- Vital teeth.

CONTRAINDICATIONS

Unrestrained
teeth;

Stage III teeth;

Loss of
supporting
tissues;

Radiologically
proven root
resorption;

Furcation
damage;

Pathological
root resorption >
1/3;

The presence of
a follicular or
dentist cyst.



Bibliography

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