



PEDIATRIC DENTISTRY DISCIPLINE

UMF „Victor Babes” Timisoara

PRACTICAL CLASS 8

ENDODONTIC TREATMENT OF PRIMARY TEETH (THE PULPOTOMY TECHNIQUE)



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THE PULPECTOMY MEANING

- it is a procedure of removing the coronal part of the pulp tissue, inflamed or infected, as a result of deep caries, and the maintenance of vital radicular pulp tissue, permitting the safest root resorption
- Some years ago it was believed that the remaining pulp tissue has to be fixed, using **formocresol**
- The up- to- date procedure is stopping the pulp tissue haemorrhage, using pressure, saline solution, adrenalin or a haemostatic agent like ferric sulfate



THE PULPOTOMY INDICATIONS

- Most primary teeth, where the **marginal ridge** is involved in the carious process will therefore require pulpotomy
- Some studies show that in 50% of the primary molars, where loss of the marginal ridge has occurred, pulp inflammation is irreversible; because of this early inflammation of the coronal pulp in primary teeth, **direct pulp capping is contraindicated**
- **Vital teeth**
- **The pain** can be felt for very short time and only after the application of stimuli



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THE PULPOTOMY INDICATIONS

- Small pulp opening, in sound dentin, during the carious lesion removal
- Accidental pulp opening, after a traumatic injury
- Opening of the asymptomatic pulp, even in the presence of carious dentin
- Red-pale haemorrhage, easy to control, after the removal of the coronal pulp
- At least 2/3 of the root length of the tooth still present
- Absence of a furcation pathology, abscess or fistula



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THE PULPOTOMY INDICATIONS

- No evidence of internal resorption in either the pulp chamber or the root canal
- When the extraction is contraindicated, because of the increased risk of haemorrhage(ex. Haemophilia)

THE PULPOTOMY CONTRAINDICATIONS

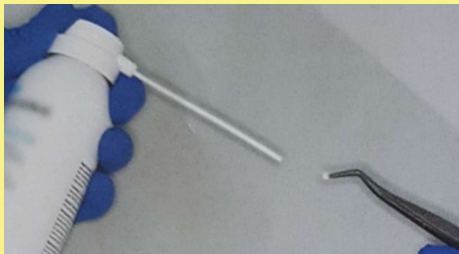
- Heard disease and immuno-compromised children
- Unrestorable tooth
- Bi- or trifurcation involvement
- Presence of an abscess
- Less ten 2/3 of the root remaining or permanent successor close to eruption



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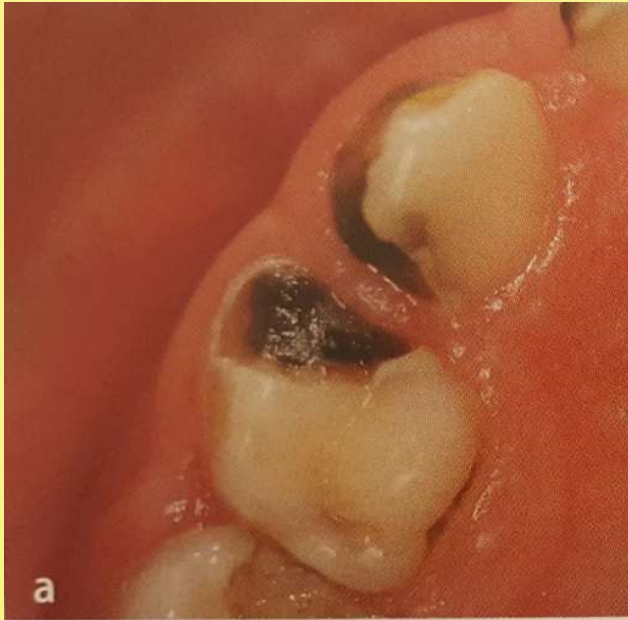
INSTRUMENTS AND MATERIALS



- Cold vitality test spray;
- Different burs: pear shaped and cylindrical diamond turbine burs, contra angle carbide round burs (big and small, normal and long neck).



Initial situation:



- Deep decay on 5.4 ; the tooth is symptoms free
- On x-ray we can determine: the depth of tooth decay and the risk to open the pulp chamber, the presence or absence of an interradicular radiolucency



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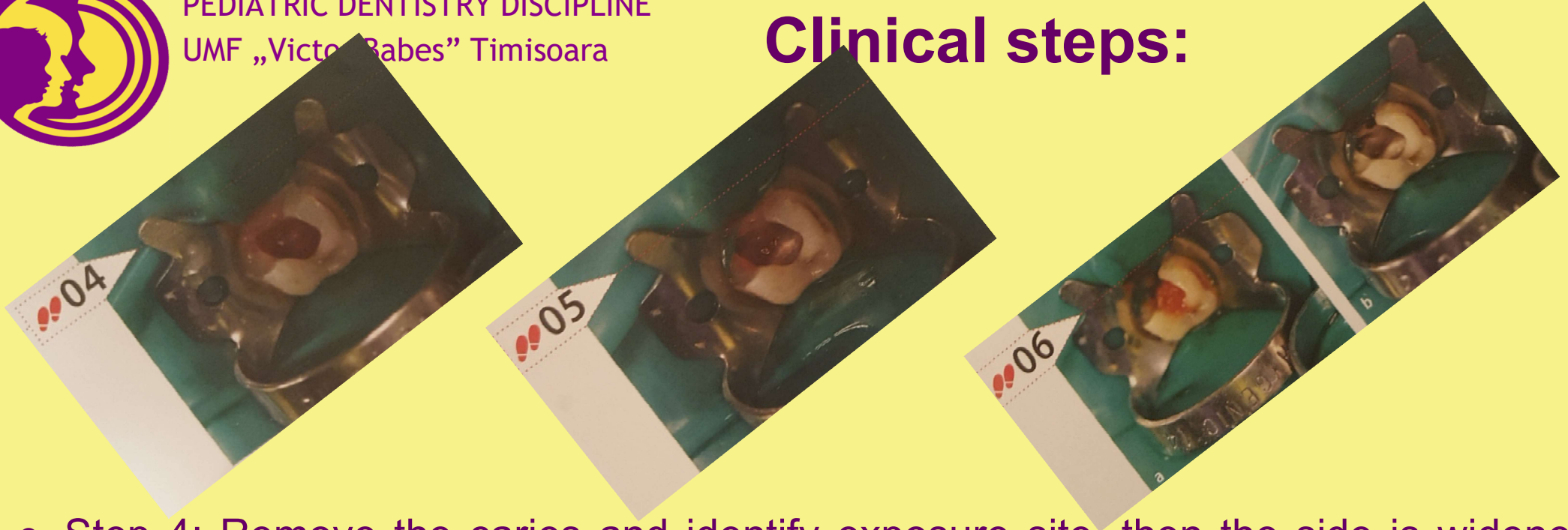
Clinical steps:



- Step 1-2-3: Give a local anaesthesia(infiltration on vestibular and palatal side of the tooth or intraligamentar infiltration) and isolate the tooth with rubber dam(in order to reduce the contamination of the pulp, to confer a better visibility for the dentist and the protection for the patient); complete decay excavation and get a slow reddish blood flow



Clinical steps:

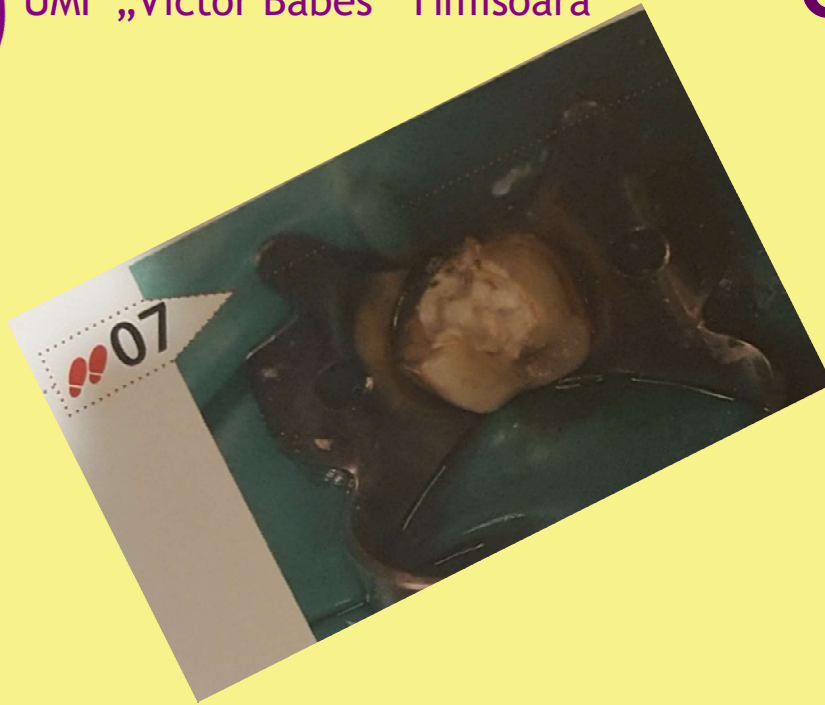


- Step 4: Remove the caries and identify exposure site, then the side is widened until the whole of the roof of the pulp chamber is removed; coronal pulp is totally removed with an excavator or a large carbide round bur
- Step 5: Red-pale haemorrhage is visible, being a very important diagnostic criteria for a vital and healthy pulp
- Step 6: Using the haemostatic agent (ferric sulphate for 60 s), the pulp in the radicular entrances will get a dark brown colour (Formocresol can be used 4 min)



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Clinical steps:



- Step 7: The entire pulp chamber can be filled with ZOE, Biodentine or MTA
- Step 8: Placement and luting of a stainless steel crown
- Step 9: The child is advised to eat, when the tissues will recover after local anaesthesia, in order to minimize a possible soft tissue traumatic injury



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