



PEDIATRIC DENTISTRY DISCIPLINE
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PRACTICAL CLASS 10.1, 10.2

DENTAL TREATMENT OF YOUNG PERMANENT TEETH



YOUNG PERMANENT TEETH

- are immature permanent teeth
- 4 years from eruption in the oral cavity
- until the apex is completely closed
- incomplete enamel mineralization after eruption



PATHOLOGY OF THE YOUNG PERMANENT TEETH

- **CARIOUS LESIONS**
- **LOCALIZED, STRUCTURAL DEFECTS** (hypomineralization, hypomaturation of the enamel, Amelogenesis Imperfecta, Dentinogenesis Imperfecta etc)
Molar-Incisor-Hypomineralization (MIH syndrome)
- **DENTAL ANOMALIES**
- **TRAUMA**



Clinical procedures

PREVENTIVE:

- Fluoridation
- Pit and fissure sealing

CURATIVE:

- Caries removal and filling
- Infiltration of defects
- Complex restoration



FLUORIDATION

- for patients with medium and high caries risk
- in geographical areas where water is poor in fluoride and there is insufficient fluoride intake from other sources:
fluoridated salt, fluoridated milk, toothpaste, mouthwash
- **AT HOME** or **IN OFFICE**



FLUORIDATION

- **AT HOME:**
 - **Topical**
 - toothpaste
 - mouthwash
 - topical creams
 - **General**
 - tablets or drops**
 - effective only if taken during the formation period of the teeth (odontogenesis)



FLUORIDATION

- **IN OFFICE:**

- higher concentration

- **Gels** (applied in trays)
 - **Varnishes** (pensulated on the teeth)

- patient does not rinse after the procedure

Caution! Total amount of fluoride from all sources

Side effect: dental fluorosis



PIT AND FISSURE SEALING

- for patients with **medium** and **high caries risk**
- risk is increased when the occlusal morphology of the molars presents **deep grooves and fissures** (retentive for dental plaque)
- **CONVENTIONAL** (no preparation) or **EXTENDED** (minimal enlargement of the fissures, using a fissure-bur)



Correct DIAGNOSIS!
- clinical, paraclinical, differential

CURATIVE TREATMENT:

The general TREATMENT AIMS for young permanent teeth are:

- Economy of hard dental tissues**
- Pulp protection**
- Maintenance of pulp vitality**
- Stimulation of root development (apexogenesis)**



DENTAL CARIES IN YOUNG PERMANENT TEETH

CLINICAL FORMS:

EVOLUTIONARY CARIES

- progressive
- starting point: ***occlusal pit and fissures***

SURFACE CARIES

- localized on the ***vestibular surfaces of incisors and canines*** and in the ***cervical area of molars and*** premolars



DENTAL MATERIALS USED IN THE CORONAL RESTORATION OF YOUNG PERMANENT TEETH

- **conventional Glass Ionomer Cements (GIC)**
- **Resin Modified Glass Ionomer Cements (RMGIC)**
- **Resin Composites**

Complex restoration of severely destroyed young permanent teeth includes:

- pulp therapy (bioactive, biocompatible materials)
- base restoration
- dental crowns (either custom-made or prefabricated)