

PEDODONTICS

CHILDHOOD GINGIVAL DISEASES



MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA

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Anatomical Differences Between Children and Adults ←

- Children have unique anatomical features in their periodontal structures compared to adults.
- Gingiva in children is redder due to thinner epithelium and greater vascularity.

Physiological Changes During Tooth Eruption ←

- Pre-eruption bulge indicates the impending arrival of a tooth.
- The gingival margin develops as the crown of the tooth penetrates the mucosa.

Plaque-Induced Gingivitis

- The primary cause of gingivitis is the presence of dental plaque.
- Children aged 8-12 experience faster plaque accumulation than adults.

Impacts of Orthodontic Appliances

- Fixed appliances can hinder effective tooth brushing, leading to supragingival plaque shift.
- Gingival changes can manifest within 1-2 months post-appliance placement.

Associated Conditions and Nutritional Deficiencies

- Conditions like leukemia can lead to significant changes in gingival appearance and health.
- Nutritional deficiencies, particularly Vitamin C, contribute to specific gingival conditions like scorbutic gingivitis.



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CHILDHOOD GINGIVAL DISEASES



Overview of Gingival Diseases in Children

- Numerous types of gingival diseases exist that can impact children's periodontal health.
- Dental practitioners play a crucial role in early diagnosis and treatment optimization.



Clinical Appearances in Children

- Lack of stippling due to shorter, flatter papillae from the lamina propria.
- Hyperemia and edema result in rounded and rolled gingival margins during childhood.



Classification of Gingival Diseases

• Diseases can be categorized based on associated plaque and other local contributing factors.



Local Contributing Factors of Gingivitis

- Eruption cysts and hematomas can emerge alongside erupting teeth.
- Eruption gingivitis often occurs due to the challenges in maintaining oral hygiene.



Gingival Diseases Modified by Systemic Factors

- Endocrine factors, such as those seen during puberty, can exacerbate gingival inflammation.
- Understanding the systemic influences is essential for identifying and managing gingivitis.



Medication-Induced Gingival Changes

- Certain medications like Phenytoin and Nifedipine can lead to drug-induced gingival enlargement.
- The anterior part of the mouth is most frequently affected by these changes.



Symptoms and Incidence (-)

- Systemic symptoms include fever, malaise, and lethargy
- Rare in adults, but can lead to severe complications like dehydration

Fungal Linear Gingival Erythema

- Characterized by a band of intense erythema in the gingiva.
- May be localized or generalized across the mouth.

Acute Necrotizing Ulcerative Gingivitis (ANUG)

- Affects interdental papilla and gingiva, can spread to bone.
- Common in young adults and smokers.

Hereditary Gingival Changes

- Includes familial fibrotic enlargements such as hereditary gingival fibromatosis
- Appears non-hemorrhagic, firm, and progresses slowly

Gingival Manifestations of Systemic Diseases

- Chicken pox (Varicella) can result in oral ulcers in children
- Mononucleosis leads to lesions caused by Epstein Barr Virus

Periodontitis in Children

- A Rare but linked to systemic diseases like leukemia and diabetes
- Referral to a specialist is advised for children presenting with periodontitis



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MIND MAP

NON-PLAQUE INDUCED GINGIVAL DISEASES



Viral Acute Herpetic Gingivostomatitis

- Caused by Herpes Simplex Virus (HSV)
 type 1
- Mostly occurs in infants and children under 6 years old

Healing Process

- Healing occurs within days in infants, up to 2 weeks in older children.
- X Rarely seen in adults, but can be severe

Candidiasis

- Caused by overgrowth of Candida albicans
- Often follows antibiotic use or immunodeficiency conditions

Congenital Abnormalities

- Congenital Epulis appears along the alveolar ridge
- Congenital Gum Synechiae cause breathing difficulties at birth.

→ Foreign Body Reactions

- Not common but can occur during amalgam tattooing
- May cause changes in the gingiva that require attention

Soft Tissue Lesions

- Herpangina associated with Coxsackie viruses, commonly seen in children
- Hand-foot-and-mouth disease can affect eating due to mouth sores

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What are childhood gingival diseases and their significance?





Childhood gingival diseases are numerous and can progress to affect the periodontium in adults. Early recognition and diagnosis by dental practitioners are crucial for optimizing treatment outcomes.





What anatomical differences exist between the periodontal structures of children and adults?





Children's periodontal structures have several anatomical differences, such as a more reddish gingival color due to thinner epithelium, lack of stippling, rounded gingival margins, and greater vascularity compared to adults.





What clinical changes occur in the gingiva associated with the eruption of permanent teeth?





During tooth eruption, the gingiva displays a pre-eruption bulge, edematous and rounded gingival margins, and may be more prominent in mixed dentition, particularly in the maxillary anterior region.





What is plaque-induced gingivitis, and how does it manifest in children?





Plaque-induced gingivitis is mainly caused by plaque accumulation, which forms more rapidly in children aged 8-12. Symptoms include fiery red discoloration, swelling, and less frequent bleeding or increased pocket depth than in adults.





What is an eruption cyst, and how does it present?





An eruption cyst is a form of dentigerous cyst associated with an erupting tooth, characterized by translucent, fluctuant, and circumscribed swelling.





What is puberty gingivitis, and how is it related to hormonal changes?





Puberty gingivitis is enhanced gingival inflammation occurring in children during puberty, correlated with elevated sex hormones, and peaks earlier in girls than in boys.





What are the signs and symptoms of leukemia-induced gingivitis in children?





Leukemia-induced gingivitis presents with swollen, glazed, spongy gingiva appearing red to deep purple, accompanied by gingival bleeding, diffuse mucosal enlargement, and symptoms like lethargy and lymphadenopathy.





What is scorbutic gingivitis, and what causes it?





Scorbutic gingivitis is caused by vitamin C deficiency, leading to hemorrhage, collagen degeneration, and edema, resulting in a bluish, soft, and friable gingiva.





What factors can modify gingival diseases in children?





Gingival diseases in children can be modified by systemic factors such as hormonal changes (e.g., puberty), blood dyscrasias (e.g., leukemia), nutritional deficiencies (e.g., vitamin C deficiency), and medications (e.g., drug-induced gingival enlargement).





What is the prevalence of periodontitis in children, and when should a referral be made?





Periodontitis is rare in children and is usually associated with systemic diseases. If encountered, a referral to a specialist is necessary for management.



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AGE DETERMINATION FROM OPG



MIND MAP & CUE CARDS



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Primary Teeth Eruption ← €

- Primary teeth erupt between 6 months and 2.5 years.
- Primary teeth also have specific exfoliation times.

Eruption Factors ← ♠

- Genetics plays a crucial role.
- Nutrition impacts the timing of eruption.

Early Eruption in Preteens

- Ages 9-10: Mandibular canines replace primary canines.
- Eruption sequence includes mandibular canines after molars and incisors.

Late Stage Eruption (Ages 11-12)

- Ages 11-12: Maxillary canines and mandibular 2nd premolar are the last to erupt.
- Eruption of second molars follows this stage.

Third Molars Development

- Ages 17+: Third molars erupt between 17-25 years.
- Resulting in a complete set of 32 permanent teeth.



AGE DETERMINATION FROM OPG



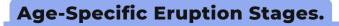
Importance of Tooth Eruption

- Tooth eruption indicates dental age.
- Acts as an index of skeletal maturation.



Permanent Teeth Start Eruption

- Permanent first molars begin to appear around 6 years.
- Complex influences like genetics and nutrition affect the process.



- Ages 6-7: Permanent 1st molars and mandibular incisors are visible.
- Ages 8-9: All permanent incisors have erupted.



- Ages 10-11: Maxillary premolars and mandibular 1st premolar erupt.
- This stage occurs between ages 10-12.



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Summary of Eruption Stages (Ages 10-12)

- By ages 13–17, all permanent teeth are typically erupted except for 3rd molars.
- A total of 28 permanent teeth without primary teeth in the oral cavity.

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What is a valuable indicator of dental age and skeletal maturation?





Tooth eruption serves as a valuable indicator of dental age and an index of skeletal maturation.





At what age do primary teeth erupt in the mouth?





Primary teeth erupt in the mouth from 6 months to 2 and a half years of age.





When do permanent first molars start to appear in the mouth?





Permanent first molars start to appear in the mouth at around 6 years of age.





What factors can influence the eruption of permanent teeth?





Factors that can influence the eruption of permanent teeth include genetics, nutrition, preterm birth, socioeconomic status, body height and weight, craniofacial morphology, hormonal factors, and various systemic diseases.





At what ages are primary teeth typically being shed along with the eruption of permanent teeth?





Primary teeth are typically being shed between the ages of 6 to 12 years.





What permanent teeth erupt during the early stage of 10-12 years of age?





Answer 6

During the early stage of 10-12 years of age, permanent mandibular canines replace primary mandibular canines.





Question 7

Which permanent teeth erupt at the middle stage of 10-12 years of age?





Answer 7

Maxillary first and second premolars and mandibular first premolar erupt at the middle stage of 10-12 years of age.





Question 8

What is the last group of teeth to erupt during the late stage of 10-12 years of age?





Answer 8

Maxillary canines and mandibular second premolars are the last to erupt during the late stage of 10-12 years of age.





Question 9

What is noted about all permanent teeth by the age of 13-17 years?





Answer 9

All permanent teeth are erupted except for third molars by the age of 13-17 years.





Question 10

When do third molars typically erupt if present?





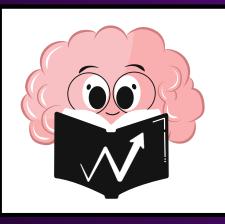
Answer 10

Third molars typically erupt between the ages of 17 to 25 years, resulting in a total of 32 permanent teeth in the oral cavity.



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PREVENTIVE DENTISTRY IN PEDIATRIC DENTISTRY - PIT 8, FISSURE SEALANTS, FLUORIDES



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Pit and Fissure Sealants

- Sealants are liquid materials applied to occlusal pits and fissures of teeth.
- They can cure chemically or with visible light, forming a protective barrier.

Evidence Supporting Sealants

- Research shows children with sealants have fewer restorative treatments.
- Placement leads to longer intervals between necessary dental work.

Materials Used for Sealants

- Resin-based sealants are the preferred choice due to effectiveness.
- Glass-lonomer cements serve as an interim option but may lack retention.

Preference for Sealant Visibility

- Colored sealants are preferred for easy monitoring and assessment.
- Light-cured sealants are favored over UV-cured options.

Sealant Maintenance and Reapplication

- Regular reapplication is essential for long-term effectiveness.
- Studies indicate high retention rates when properly managed.



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Introduction to Preventive Dentistry

- Preventive dentistry focuses on avoiding dental issues before they
- Key components include the use of pit and fissure sealants and fluoride.



Benefits of Sealants

- Cost-effective for preventing dental restorations in children.
- Significantly reduces the progression of cavities over five years.



Use on Incipient Lesions

- Sealants can cover early-stage lesions to prevent progression
- Regular checks are necessary to ensure sealant integrity.



Comparison of Sealant Types

- Unfilled sealants outperform filled versions in terms of retention.
- Topical fluorides may negatively affect the integrity of filled sealants.



Sealant Placement Technique

- Best applied by trained dental auxiliaries using effective isolation techniques.Enamel must be cleaned and etched for optimal adhesion.



Conclusion

- Training auxiliaries for sealant application is a cost-effective solution.
- Ensuring preventive care in pediatric dentistry is crucial for long-term dental health.

2019 Guidelines for Water Fluoridation ←

- Self-use products, such as fluoridated toothpaste, are recommended.
- Fluoride supplements (drops or tablets) should not be used.

Professionally Applied Products <- (!

- Fluoride varnish contains 22.6 mg/mL fluoride ion and is widely used.
- DURAPHAT is the common fluoride varnish applied by professionals.

Fluoride Gel and Foam 🗲 🙀

- Fluoride gels can contain up to 12.3 mg/g of fluoride.
- Applied using trays that hold the gel on teeth for several minutes.

Silver Diamine Fluoride

- 38% SDF used twice yearly can arrest carious lesions in primary teeth.
- A major drawback is the staining of teeth.

Summary of Preventive Strategies

- Regular fluoride application enhances dental health in children.
- Multi-faceted approach includes water fluoridation, varnishes, and specialized treatments.



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Fluoride Use in Dentistry

- Fluoride is vital for caries prevention.
- Community water fluoridation at 0.6-1.1 mg/L is effective in Australia.



- Children under 6 years should not use fluoride rinses to avoid ingestion
- Risk of dental fluorosis increases with inappropriate fluoride use.

Application of Fluoride Varnish

- Applied directly to dried teeth, forming a waxy film.
- The film remains until removed by chewing or brushing.

Contraindications for Gel and Foam

- Not recommended for children under 10 years due to ingestion risk.
- More effective for permanent dentition.

Fluoride Plus CPP-ACP Formulations

- Effective in cases of ortho demineralization.
- Helps in remineralizing enamel during orthodontic treatment.



Question 1

What is the best method to prevent pit and fissure caries in newly erupted teeth?



Answer 1

The best method to prevent pit and fissure caries in newly erupted teeth is the application of pit and fissure sealants.



Question 2

What is the role of fluoride in dental caries prevention?



Answer 2

Fluoride use is a cornerstone for dental caries prevention.



Question 3

What are pit and fissure sealants?



Answer 3

Pit and fissure sealants are chemically-active liquid materials placed onto the occlusal pits and fissures of caries-susceptible teeth to prevent caries.



Question 4

How do pit and fissure sealants protect against caries?



Answer 4

They form a micromechanically bonded protective layer that prevents the invasion of caries-producing bacteria and cuts off their access to nutrients.



Question 5

What is a significant advantage of placing resin-based sealants on children's permanent molars?



Answer 5

Placement of resin-based sealants is effective for caries reduction and results in less restorative work needed in the future.



Question 6

What happens when sealants wear down over incipient lesions?



Answer 6

When sealants wear down, communication with oral fluids occurs, and the previously diagnosed incipient lesion may become active again.



Question 7

What is the first choice of material for dental sealants?



Answer 7

Resin-based sealants are the first choice of materials for dental sealants.



Question 8

What is a key difference in retention between glass ionomer cement and resin-based sealants?



Answer 8

The retention of glass ionomer cement is significantly inferior to that of resin-based sealants.



Question 9

Why is it preferred to use colored sealants over clear sealants?



Answer 9

Colored sealants are preferred because they are easier to see during application, assess retention during follow-ups, and document over time.



Question 10

What is silver diamine fluoride used for in dental practice?



Answer 10

Silver diamine fluoride (38% SDF) is effective in arresting active carious lesions in primary teeth and root caries in permanent teeth among the elderly.



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CHILDHOOD CARIES MANAGEMENT



MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA

Causes of ECC ←

- Interaction of fermentable carbohydrates, sugars, and cariogenic microorganisms leads to ECC.
- Poor oral hygiene, night feeding with sweetened beverages, and enamel defects are significant risk factors.

Relationship with Breastfeeding +

- No evidence links prolonged breastfeeding to an increase in ECC by ages 2-3.
- Breastfeeding should be encouraged following global health recommendations.

Caries Management System

- A 10-step non-invasive strategy designed to remineralize early lesions.
- Involves assessment of patient risk and effective clinical management.

ICDAS Scoring Overview

- O Code 0: No evidence of caries.
- Code 1-3: Progressive stages of enamel lesions.
- Code 4-6: Increasing severity of dentine lesions.

Overall Management Considerations

- Incorporates comprehensive clinical and radiographic assessments.
- Patient monitoring and management are essential to enhance outcomes in children with ECC.



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CHILDHOOD CARIES MANAGEMENT



Understanding Early Childhood Caries (ECC)

- ECC refers to decayed, missing, or filled tooth surfaces in children under six.
- Severe Early Childhood Caries (S-ECC) occurs in children under three with smooth surface caries.



Impact on Quality of Life

- ECC causes pain, sepsis, and disruption to quality of life.
- Increased risk of hospitalization and greater treatment costs are associated with ECC.

Prevention Strategies

- Effective primary and secondary preventive measures should be employed.
- Focus on reducing high-sugar foods to manage ECC prevalence effectively.

Clinical Examination Protocol

- Teeth cleaning is essential before clinical inspection.
- The ICDAS system is utilized for scoring caries status, ranging from sound surfaces to extensive cavities.



Radiographic Examination

- Radiographs, particularly bitewings, are critical for identifying hidden proximal caries.
- Monitoring lesion progression through radiographic criteria is vital for effective management.

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Criteria for Caries Risk Determination

- ICDAS II scoring used for young and older children
- Radiographic codes aid in assessing risk

Non-Cavitated Lesions Management ←

- Non-cavitated lesions treated non-invasively
- Operative intervention for certain cavitated lesions

Protocol for Managing Carious Lesions

- Home care measures to control plaque
- Importance of brushing with fluoridated toothpaste

Radiographic Review Recommendations

- Yearly radiographic review for arrested lesions
- Annual bitewing for low-risk individuals suggested

Encouraging Oral Hygiene and Lifestyle Changes

- Recording plaque distribution and Overall plaque Index (PI) score
- Diet changes as children grow; attention to cariogenic items



RISK ASSESSMENT CRITERIA IN CHILDREN



Overview of Caries Risk Assessment

- Assessment focuses on clinical and radiographic signs
- Two risk categories: low risk and high risk

Caries Management Options

- Preventive measures to reduce caries risk
- Preservative (non-invasive) vs. operative (invasive) management

Enamel Thickness and Caries Risk

- Deciduous teeth have thinner enamel
- A Higher risk of caries extension into dentine

Monitoring Caries Activity

- Regular recall appointments based on caries risk
- Monitoring includes caries activity and oral hygiene coaching

Professional Care For At-Risk Patients

- Importance of regular professional visits for fluoride application
- Use of higher concentration fluoride toothpaste recommended







Question 1

What is Early Childhood Caries (ECC)?





Early Childhood Caries (ECC) is the presence of one or more decayed, missing, or filled tooth surfaces in any primary tooth in a child under the age of six.





What factors are known to contribute to the development of ECC?





ECC is caused by the interaction of fermentable carbohydrates, predominantly free sugars, and cariogenic microorganisms on susceptible teeth and hosts over time.





What is Severe Early Childhood Caries (S-ECC)?





Severe Early Childhood Caries (S-ECC) is characterized by smooth surface caries in a child less than 3 years old.





How do breastfeeding practices relate to the incidence of ECC?





Studies have shown that there is no association between sustained breastfeeding until at least 1 year of age, nighttime breastfeeding, and early childhood caries by 2-3 years of age.





What are some potential consequences of ECC for children?





Potential consequences of ECC include pain, sepsis, space loss, disruption to quality of life, growth and intellectual development issues, increased hospitalization, and higher treatment costs.





What is the ICDAS scoring system used for?





The ICDAS scoring system is used for assessing the caries status of both primary and permanent teeth, particularly providing a more refined method for evaluating enamel lesions.





What are the two initial risk categories assigned to children during caries risk assessment?





Children are initially assigned to low risk and high risk categories based solely on their clinical and radiographic signs.





What is the recommended management strategy for non-cavitated carious lesions in children?





Non-cavitated lesions should be managed with home care measures, including brushing twice daily with fluoridated toothpaste and professionally applied fluoride varnish.





How often should children who are assessed as low risk be scheduled for bitewing radiographs?





Children assessed as low risk should be scheduled for bitewing radiographs annually.





What should be emphasized during professional care visits for patients at risk of ECC?





It is important to emphasize the need for regular attendance for fluoride varnish application, use higher concentration fluoride toothpaste at home, and employ fissure sealants to help manage carious lesions.



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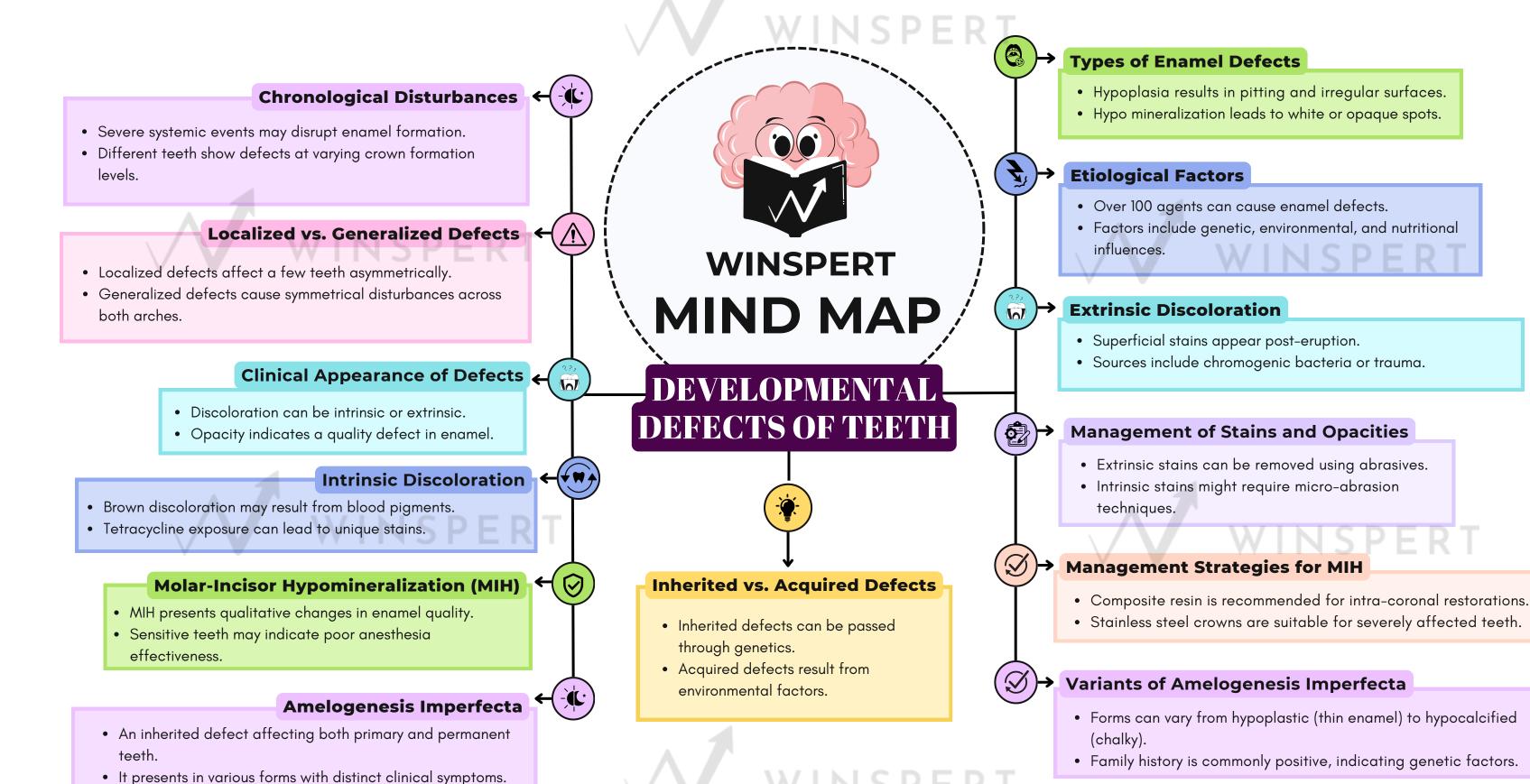
DEVELOPMENTAL DEFECTS ON TETH



MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA



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Clinical Presentation

- Teeth appear grey-brown with altered translucency.
- Normal-shaped crowns with thin, sharply tapering roots.

Symptoms and Signs ←

- Gradual pulpal obliteration due to dentin accumulation.
- A History of family dental issues may indicate genetic predisposition.

Types of Dentinogenesis Imperfecta

- Type I: Disorder of type I collagen, showing bluish or brown opalescence.
- Type II: Hereditary opalescent dentine with noticeable enamel wear and discoloration.

Dentinal Dysplasia Overview

- Two types: Radicular (type I) and coronal (type II) dentinal dysplasia.
- Both types affect teeth throughout the dentition.

Coronal Dentinal Dysplasia

- Identified as a variant of dentinogenesis imperfecta, featuring amber discoloration.
- Radiographic appearance shows 'shell teeth' with pulp morphology alterations.



DEVELOPMENTAL DEFECTS OF DENTINE



Dentinogenesis Imperfecta

- Dentinogenesis imperfecta is an inherited disorder affecting dentin.
- Associated conditions include osteogenesis imperfecta and hereditary opalescent dentine.



- Both conditions follow autosomal dominant inheritance patterns.
- Clinical similarities may require genetic evaluation to differentiate.

Dental Alterations

- Enamel fractures occur soon after eruption, leading to rapid wear.
- Weak dentin rather than enamel defects contribute to wear and exposure.

Brandywine Isolate

(

- Type III presents similar features to Types I and II with multiple pulp exposures
- Dentine production halts after mantle dentine formation.

Radicular Dentinal Dysplasia

- Characterized by rootless teeth susceptible to loss due to infections.
- Total or partial pulp obliteration evident pre-eruption.

Diagnosis and Management

- Clinical evaluation should include history and imaging studies as needed.
- Management focuses on addressing dental issues and monitoring bone density.









What are developmental defects of enamel, and how can they be classified?





Developmental defects of enamel can be inherited or acquired and are classified based on chronological disturbances, localized or generalized defects, and clinical appearance, including discoloration, opacity, and hypoplasia.





What is hypoplasia, and how does it present in enamel defects?





Hypoplasia refers to a reduction in the quantity of enamel, often presenting as pitting or an irregular surface due to a deficiency of the protein matrix.





What characterizes hypomineralization in enamel defects?





Hypo mineralization is characterized by a deficiency in mineral content, leading to opaque or bright white spots on the smooth surface of the enamel.





What are the differences between localized and generalized defects in dental enamel?





Localized defects affect one or more teeth asymmetrically, whereas generalized defects involve symmetrical disturbances on teeth of the same type on both sides of the mouth.





How does fluorosis manifest in dental enamel?





Fluorosis presents as hypo mineralization of enamel, leading to opacities that can range from tiny white flecks to confluent opacities throughout the enamel, causing a lack of translucency.





What is Molar-Incisor Hypomineralization (MIH)?





Molar-Incisor Hypomineralization (MIH) is a condition characterized by qualitative changes in enamel with varying opacities and discoloration affecting primarily first permanent molars and incisors.





What is Amelogenesis imperfecta?





Amelogenesis imperfecta is an inherited defect of enamel affecting both primary and permanent teeth, resulting in color changes, hypoplasia, hypocalcification, and hypomaturation.





What are the dental manifestations of Dentinogenesis imperfecta?





Dentinogenesis imperfecta manifests as discolored teeth (amber, grey, or purple-blue), pulpal obliteration, bulbous crowns, and possible enamel loss due to inherent weakness in dentine.





What is the classification of Dentinogenesis imperfecta?





Dentinogenesis imperfecta is classified into three types: Type I associated with type I collagen, Type II known as hereditary opalescent dentine, and Type III as the Brandywine isolate of hereditary opalescent dentine.





What is Dentinal Dysplasia?





Dentinal Dysplasia involves abnormalities in tooth roots and pulp morphology which can either be radicular (short or absent roots) or coronal (amber discoloration with typical tooth wear and altered pulp morphology).



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VITAL PULP THERAPY



MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA

Objectives of Treatment

- Primary goal: Maintain pulp vitality affected by caries or injury
- Prognostic factors: Youth and sound restoration impact success

Types of Vital Pulp Therapies ←

- Indirect Pulp Capping (IPC): Procedure for deep carious lesions
- Direct Pulp Capping (DPC): Treatment for asymptomatic non-carious exposure

Clinical Procedures for IPC ←

- Use of rubber dam to minimize contamination
- Covering incomplete caries with cavity liner and using self-cure materials

Pulpotomy Techniques

- Partial Pulpotomy: Removal of coronal pulp tissue
- Complete Pulpotomy: Full removal to orifice level to preserve vitality

Non-Vital Pulp Therapies

- Includes pulpectomy and extraction
- Indicated for irreversible pulpal conditions



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MIND MAP





Introduction to Vital Pulp Therapy

- Overview of the treatment for reversible and irreversible pulpitis
- Importance of maintaining tooth integrity and health



- Clinical diagnosis of pulp health
- Pulp conditions: Vital, reversible pulpitis, irreversible pulpitis, and necrotic pulp

Indirect Pulp Capping (IPC)

- Procedure details: Leaving caries, using biocompatible materials
- Emphasis on well-sealed restorations for success

Direct Pulp Capping (DPC)

- Medicament placement in non-carious pulp exposure situations
- Suitable for teeth with reversible pulpitis

Diagnosis and Consideration

- Clinical signs of irreversible pulpitis and treatment options
- Importance of hemostasis and biomaterial placement post-removal

Conclusion

- Vital pulp therapy options available based on clinical evaluation and diagnosis
- Ongoing research and studies influencing treatment viability for mature teeth with irreversible pulpitis

Reversible Pulpitis ←

- Diagnosis of reversible pulpitis guides immediate treatment options.
- Treatment decisions rely on individual tooth conditions and extent of carious exposure.

Materials Used in Pulp Therapy

- Calcium Hydroxide historically served as the staple material for vital pulp therapy (VPT).
- Hydraulic Calcium Silicate Cements (CSCs) now represent the gold standard, supported by recent clinical trials.

Indirect Pulp Capping ←

- For indirect pulp capping, a hard-setting Calcium Hydroxide cavity liner is utilized.
- Followed by a Glass lonomer Cement (GIC) base and final restoration to ensure proper sealing.

Pulpotomy Approaches

- Calcium Silicate cements are effective for partial and complete pulpotomy cases
- MTA is noted to have the highest success rate across various cases of pulpitis.

Importance of Permanent Restoration

- Swift placement of permanent restorations is critical in VPT.
- Ideally, restorations should be performed in the same session to prevent contamination.



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SUMMARY OF PULP THERAPY INDICATIONS



Overview of Pulp Therapy Types

- Understanding different pulp therapies is essential for effective dental treatment.
- Pulp therapy types depend on pulpal involvement, signs, symptoms, and patient circumstances.

(☐)→ Irreversible Pulpitis

- Permanent teeth with carious pulp exposure require specific treatment strategies.
- Treatment options vary based on the definitive diagnosis of irreversible pulpitis.

Examples of Hydraulic CSCs

- Notable CSCs include:
 - MTABio dentine
 - Total Fill
 - Neo MTA
 - iRoot BP Plus / Endo Sequence Putty

Direct Pulp Capping

- Direct pulp capping utilizes Calcium Silicate-based cements like MTA and Bio dentine.
- MTA has shown higher success rates compared to Calcium Hydroxide in recent studies.

→ Adverse Effects

- Despite the high success of CSCs, tooth discoloration, particularly from MTA, is a noted adverse effect.
- $\bullet\,$ It's crucial to evaluate the long-term aesthetic impacts of chosen materials.

Case Examples and Imaging

- Vital Pulp Therapies illustrated through X-rays and photos in instances of irreversible pulpitis.
- Detailed examples include Partial Pulpotomy and Full Pulpotomy procedures.







What is the primary objective of vital pulp therapy (VPT)?





The primary objective of vital pulp therapy (VPT) is to maintain the integrity and health of the teeth and the supporting tissues.





Under what condition is vital pulp therapy (VPT) indicated?





Vital pulp therapy (VPT) is indicated for teeth diagnosed with a normal pulp requiring pulp therapy or with reversible pulpitis.





What is indirect pulp capping (IPC)?





Indirect pulp capping (IPC) is a procedure performed in a tooth with a deep carious lesion approximating the pulp, where the caries surrounding the pulp is left in place and covered with a biocompatible material.





What type of material is traditionally used in vital pulp therapies?





Historically, Calcium Hydroxide was the most common material used in vital pulp therapies (VPT).





What is the procedure involved in direct pulp capping (DPC)?





Direct pulp capping (DPC) involves placing a medicament or material in direct contact with pulp tissue following noncarious pulp exposure in asymptomatic teeth or reversible pulpitis.





What is the difference between partial pulpotomy and complete pulpotomy?





Partial pulpotomy involves the removal of only a portion of diseased coronal pulp tissue (2-3 mm), while complete pulpotomy involves the complete removal of the full coronal pulp tissue to the orifice level.





What are some examples of hydraulic calcium silicate cements (CSCs) used in VPT?





Examples of hydraulic calcium silicate cements (CSCs) include MTA, Bio dentine, Total Fill, and iRoot BP Plus/Endo Sequence Putty.





What is the significance of using a rubber dam during vital pulp therapy procedures?





The use of a rubber dam during vital pulp therapy procedures minimizes moisture and bacterial contamination of the operative field.





What is an important diagnostic determination when considering pulpotomy as a treatment option for irreversible pulpitis?





The direct visualization of exposed pulp is an important diagnostic determination when considering pulpotomy as a treatment option.





What adverse effect is associated with calcium silicate cements (CSC) used in vital pulp therapy?





Tooth discoloration has been confirmed as an adverse effect associated with calcium silicate cements (CSC), especially with MTA.



PEDODONTICS

TRAUMA GUIDEINES



MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA

Classification of Traumatic Dental Injuries (TDIs)

- TDIs are classified into two main categories: Fractures and Luxation injuries.
- Avulsion of both primary and permanent teeth is also recognized.

Recommended Radiographic Series

- Parallel periapical radiographs of specific teeth help in thorough examination.
- Maxillary occlusal radiographs and other tailored views may be necessary for comprehensive evaluation.

Principles of Radiation Exposure

- Consideration of ionizing radiation exposure should be based on diagnostic necessity.
- Initial imaging is crucial for baseline comparisons in follow-up examinations.

Evaluating Pulp Status

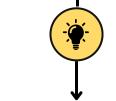
- Pulp condition assessment is key in managing TDIs.
- Sensibility tests (cold or electric) help evaluate critical pulp health indicators.

Detailed Classification of Fractures

- Fractures categorized into enamel infraction, uncomplicated crown fractures, and complicated crown fractures.
- Each type has specific considerations for both primary and permanent teeth care.







Overview of Dento-Alveolar Trauma

- Dental trauma is common, resulting in fractures, displacements, and soft tissue injuries.
- A Concurrent injuries create a negative synergistic effect on tooth health.



- Radiographs are critical for accurate diagnosis; undetected fractures can occur.
- Multiple imaging projections and standardization are essential for clear radiographic assessments.

Advanced Imaging Techniques

- Cone Beam Computed Tomography (CBCT) enhances visualization of TDIs.
- 3D imaging aids in understanding fracture location and extent.

Importance of Photographic Documentation

- Clinical photographs are vital for documenting injuries and monitoring recovery
- They serve as medico-legal records, useful in potential legal cases.

Limitations of Pulp Sensibility Testing

- Loss of sensibility can occur post-trauma, complicating assessments.
- Initial testing is recommended to establish a baseline for future comparisons.

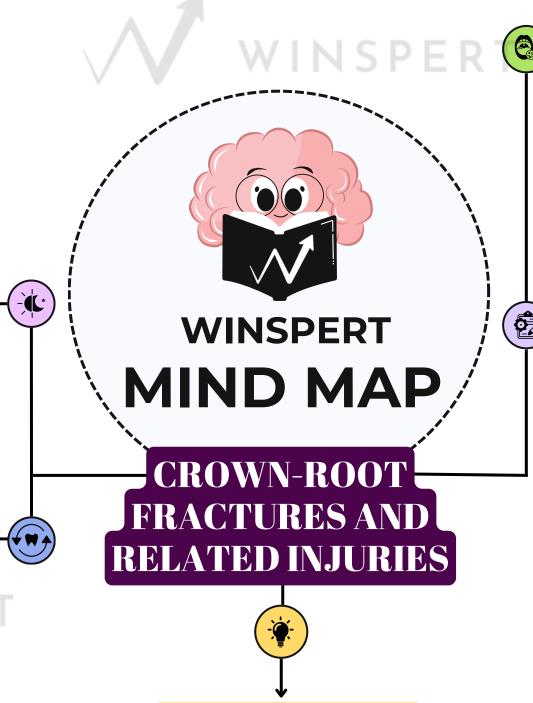


Classification of Crown-Root Fractures ←

- Crown-root fractures can be divided into two main types:
 - i. Uncomplicated Crown-Root Fractures
 - These fractures do not involve the pulp.
 - ii. Complicated Crown-Root Fractures
 - A These fractures involve the pulp and require more complex interventions.

Alveolar Fractures

- Alveolar fractures afect the bone surrounding the teeth.
- Alveolar Fractures in Primary Teeth
 - Treatment may focus on preserving the primary teeth until they exfoliate.
- Alveolar Fractures in Permanent Teeth
 - Permanent alveolar fractures often necessitate surgical intervention.



Overview of Crown-Root Fractures

- Crown-root fractures can occur in both primary and permanent teeth.
- Understanding the classification of these fractures is essential for treatment.



- This type of fracture also occurs in both primary and permanent teeth.
- Root Fractures in Primary Teeth
 - Primary root fractures can heal naturally but require monitoring.
- Root Fractures in Permanent Teeth
 - Permanent root fractures are more serious and often require immediate treatment.

Luxation Injuries

- Luxation injuries can affect both primary and permanent teeth in different ways
- Concussion
 - i. A concussion in dental terms refers to a temporary injury without displacement
 - ii. Concussion for Primary Teeth
 - Usually resolves without complications.
 - iii. Concussion for Permanent Teeth
 - Requires evaluation for potential long-term effects.
- Subluxation
 - i. Subluxation involves partial dislocation of the tooth.
 - ii. Subluxation for Primary Teeth
 - Generally has good prognosis with minimal intervention.
 - iii. Subluxation for Permanent Teeth
 - Treatment may include stabilization and monitoring
- Extrusion (Extrusive Luxation)
 - i. Extrusion occurs when the tooth is partially displaced from its socket.
 - ii. Extrusion for Primary Teeth
 - May require repositioning and stabilisation.
 - iii. Extrusion for Permanent Teeth
 - Often requires immediate dental care to prevent complications.

Map Your Way to ADC Success!

Understanding Avulsion ←

- Avulsion is the complete removal of a tooth from its socket.
- Avulsion of permanent teeth occurs in 0.5% -16% of dental injuries.

Treatment of Avulsion ← /!

- Replantation is usually the preferred treatment but may not be immediate.
- A treatment plan: essential for a favorable outcome.

Public Awareness for Avulsed Teeth ←

- Dentists must advise on first aid for avulsed teeth.
- Media campaigns are vital for raising public awareness.

Immediate Actions at the Accident Site

- Immediate replantation of the avulsed tooth s critical.
- If replantation isn't possible, use appropriate storage media for the tooth.

Aftercare Following Replantation

- After replanting, the patient should bite down on gauze or a cloth to stabilize the tooth.
- If unable to replant, store the tooth properly in a medium to prevent dehydration



LATERAL LUXATION AND AVULSION OF TEETH



Types of Luxation

- Luxation refers to the dislocation of teeth, affecting both primary and permanent teeth.
- Intrusive luxation (intrusion) can severely damage tooth structure.

Severity of Avulsion

- Avulsion is one of the most serious dental injuries.
- Prognosis depends on immediate actions taken post-injury.

Contraindications for Replantation

- Situations where replantation is not indicated include:
 - i. Severe caries or periodontal disease.
 - ii. Uncooperative patients or those with severe cognitive impairment.
 - iii. Serious medical conditions like immunosuppression.

Emergency Procedures for Avulsion

- Parents, guardians, and teachers should receive information on handling dental avulsions.
- Emergency instructions can also be given via telephone.

Proper Handling of Avulsed Teeth

- To pick up the tooth, handle it by the crown, avoiding the root.
- If dirty, rinse gently in milk, saline, or saliva before replantation.



Conclusion

- Seek immediate dental attention for any avulsed tooth.
- Quick and accurate response can significantly improve the prognosis for avulsed teeth.

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Classification of Tooth Maturity

- Closed apex (Mature teeth) vs. Open apex (Immature teeth).
- Young patients have diferent healing prospects.

Treatment Protocol for Closed Apex ←

- Immediate replantation recommended for the best prognosis.
- Delayed reimplantation over 60 minutes leads to poor outcomes.

Storage Conditions

- Physiologic mediums: milk, HBSS, saliva enhance chances of success.
- Non-physiologic conditions increase risks if out of mouth for too long.

Follow-Up Protocol for Open Apex

- Monitor clinically and radiographically at multiple intervals.
- Follow-up duration: at least five years for best outcomes.

Summary of Expected Outcomes

- Successful replantation leads to improved esthetics and function.
- Delayed replantation often results in ankylosis-related issues.



TREATMENT GUIDELINES FOR AVULSED



PERMANENT TEETH

Importance of Timely Action

- Immediate replantation is crucial for PDL cell viability.
- Storage medium choice affects PDL cell condition.



- PDL cells most viable if replanted within 15 minutes.
- Cells may be compromised in proper storage under 60 minutes.

Treatment Protocol for Open Apex

- Potential for spontaneous healing in immature teeth.
- Avoid endodontic treatment unless pulp necrosis is evident.

Use of Antibiotics

- Antibiotic therapy post-replantation is recommended.
- Doxycycline preferred for its antiresorptive properties.

Follow-Up Protocol for Closed Apex

- Similar monitoring timelines as for open apex.
- Focus on signs of root resorption and other complications.











What are the common injuries associated with trauma to the dento-alveolar region?





Trauma involving the dento-alveolar region often results in fracture and displacement of teeth, crushing and/or fracturing of bone, and soft tissue injuries, including contusions, abrasions, and lacerations.





How can concurrent injuries affect dental trauma?





The combination of two different types of injuries occurring simultaneously to the same tooth can create a negative synergistic effect, making the situation more detrimental than a single injury.





What two main types of traumatic dental injuries (TDIs) exist?





TDIs can be classified into two main types: fractures and luxation injuries of both primary and permanent teeth.





Why are radiographic examinations important in diagnosing dental injuries?





Radiographs are crucial to make a thorough diagnosis of dental injuries, as root and bone fractures may occur without any clinical signs and can be undetected with only one radiographic view.





What role does cone beam computerized tomography (CBCT) play in assessing traumatic dental injuries?





CBCT enhances the visualization of traumatic dental injuries, particularly root fractures, crown/root fractures, and lateral luxation, helping to determine the location, extent, and direction of a fracture.





What is the importance of photographic documentation in dental injury cases?





Clinical photographs are recommended for documenting injuries initially and for follow-up examinations as they allow monitoring of healing, assessment of discoloration, and provide medico-legal documentation.





How can pulp status be evaluated in cases of traumatic dental injuries?





Pulp status can be assessed through sensibility tests such as a cold test or electric pulp test, which evaluate neural activity of the pulp but may not reliably indicate vascular supply.





What guidelines should be followed for replanting an avulsed permanent tooth?





The best treatment for an avulsed permanent tooth is immediate replantation at the accident site; if this is not possible, the tooth should be stored in a suitable medium like milk, saliva, or saline.





What is the expected outcome for a replanted tooth with closed apex if it has been out of the mouth for more than 60 minutes?





If the tooth has been out of the mouth for more than 60 minutes, the periodontal ligament becomes necrotic and is not expected to regenerate, leading to a poor long-term prognosis.





What is the recommended follow-up protocol for replanted teeth?



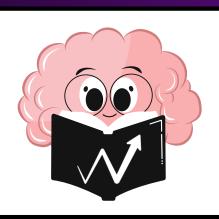


Replanted teeth should be monitored clinically and radiographically at 2 weeks, 1 month, 2 months, 3 months, 6 months, one year, and yearly thereafter for at least five years.



PEDODONTICS

PRIMARY TEETH RESTORATIONS



MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA

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Technical Challenges in Restoration ←

- Primary teeth are smaller and have thinner enamel than permanent teeth.
- Increased risk of caries progression and pulp exposure during treatment.

Establishing Diagnosis +

- Key elements: patient history, examination, and radiographs.
- Radiographs (bitewings) are essential for accurate diagnosis of primary molar caries.

Keys to Successful Restoration ←

- Material choice is critical for restoring primary teeth.
- Factors to consider include the child's specific situation and needs.

Advantages and Disadvantages of Pre-formed Crowns ← (♥ ♥ ↑

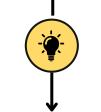
- Indications for use include carious lesions or after pulp treatment.
- Preformed crowns reduce major failure risk compared to fillings.

Limitations and Considerations

- A Preparation for aesthetic crowns is demanding; limited adaptation possible.
- Risk of wear or fracture for veneered crowns in contact with opposing teeth.



PRIMARY TEETH RESTORATIONS



The Impact of Dental Caries

- Dental caries significantly affects children's health globally.
- Serious complications for dental and general well-being.

Differences Between Primary and Permanent Molars

- Features of primary molars include: bulbous crowns and cervical constriction.
- Characteristics: narrow occlusal tables, thin enamel, and narrow root canals.

Treatment Options Available

- Restoration may include intra-coronal (fillings) or extra-coronal (crowns).
- Decision factors: caries risk, extent of caries, age of patient, method of treatment.

Preferred Materials for Restoration

- Materials ranked by preference:
 - i. Pre-formed Stainless Steel Crowns
 - ii. Resin Modified Glass Ionomer (RMGIC)
 - iii. Compomer (Polyacid modified composite resin).
 - iv. Resin-Based Composite
 - v. Conventional Glass lonomer (GIC)

Aesthetic Pre-formed Crowns

- Aesthetic options include SSC with composite veneer or zirconia porcelain crowns.
- Trade-offs include bulkiness and increased tooth reduction for fitting.

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Application of the Hall Technique ←

- This technique can be utilized to prevent caries on the mesial surface of the first permanent molar.
- It is particularly efective when addressing distal surface caries on adjacent primary second molars.

Compomers (Polyacid Modified Resin Composites) ←

- Compomers share properties of both GIC and hybrid composites and don't require acid etching.
- Not recommended for pulpotomized or pulpectomized primary teeth due to potential retention loss.

Resin Based Composites

- These are esthetic materials that can bond to enamel after acid etching.
- They require careful placement, ideally using rubber dam isolation, but do not release fluoride.

Conventional Glass Ionomer Cement (GIC) ←

- GICs are derived from organic acids and a glass component, setting through an acid-base reaction.
- They serve as fluoride reservoirs but lack strength compared to other materials.

Restoration of Primary Incisors

- Restoration is often accomplished using the Composite Strip Crown technique or preformed crowns.
- Options include Composite veneered stainless-steel crowns or zirconia porcelain crowns.





HALLS TECHNIQUE WITH SSC



Overview of Hall's Technique

- The Hall Technique involves placing a stainless-steel crown on primary molars without anaesthesia or tooth preparation.
- The crown: seated using finger pressure, and excess cement s removed afterward.



Resin Modified Glass Ionomer Cement (RMGIC)

- RMGIC incorporates monomers and initiators for polymerization, making it suitable for certain restorations.
- Evidence shows effectiveness for small to moderate Class II restorations.



Characteristics and Use of Compomers

- Compomers release approximately 10% of the fluoride that GIC or RMGIC releases.
- Retention loss is a primary concern with this material.

Disadvantages of Resin Based Composites

- They are costly and sensitive to technique, with polymerization shrinkage leading to potential secondary caries.
- The margin leaks can increase the risk of new decay.



Limitations of GIC

- GICs can have surface roughness, poor color stability, and low wear resistance.
- When used for Class II restorations in primary molars, their performance is subpar.





What is the significance of restoring primary teeth in children?





Restoring primary teeth is important as dental caries affects a significant percentage of children worldwide, which can lead to serious complications for their dental and general well-being. Rehabilitation of a child's dentition can restore health and function.





What challenges are associated with the restoration of primary teeth?





The restoration of primary teeth is technically difficult due to their smaller size compared to permanent teeth, thinner enamel, high pulp horns, increased risk of caries progression into dentine, and a higher risk of pulp exposure during treatment.





What are some features that differentiate primary molars from permanent molars?





Features of primary molars include a bulbous crown, cervical constriction, a narrow occlusal table, thin enamel, pulp horns, narrow root canals, and a thin and porous pulpal floor.





What are the key elements in establishing an accurate diagnosis for carious primary teeth?





Key elements include taking a thorough history, conducting a physical examination, and performing special tests like radiographs. Clinicians should also question the child and their parents regarding symptoms.





What treatment options are available for restoring carious primary teeth?





Treatment options include intra-coronal (fillings) and extracoronal (crowns) restorations. The type of restoration depends on factors such as caries risk, extent of caries, age of the patient, and method of treatment.





What materials are preferred for restoration of primary teeth?





Preferred materials include preformed stainless steel crowns, resin modified glass ionomer (RMGIC), compomer, resin-based composite, and conventional glass ionomer (GIC).





What is the Hall Technique in relation to stainless steel crowns?





The Hall Technique involves placing a stainless-steel crown on a primary molar without local anesthesia, caries removal, or tooth preparation, then seating it with finger pressure.





What are the properties and usage recommendations for Resin Modified Glass Ionomer (RMGIC)?





RMGIC are glass ionomer cements with added monomers and are supported for use in small to moderate size Class II restorations.





How do compomers compare to glass ionomer cements (GIC)?





Compomers are light-cured and provide adhesion without acid etching, but release only about 10% of the fluoride compared to GIC or RMGIC, and are not recommended for pulpotomized or pulectomized primary teeth.





What is a significant drawback of using resin-based composites for primary teeth restorations?



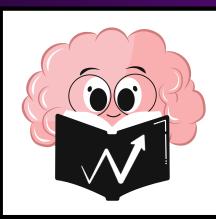


A major drawback is polymerization shrinkage, which can lead to leaking restoration margins, increasing the risk for secondary caries. Additionally, they require a time-consuming process for bonding to enamel.



PEDODONTICS

BEHAVIOUR MANAGEMENT



MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA

Understanding Children's Development ←

- BMTs are tailored to children's social, emotional, and cognitive development.
- Efective communication and behavioral guidelines enhance dental treatment outcomes.

Non-Pharmacological Techniques

- Tell Show Do (TSD) is the most effective communication technique.
- Modeling is effective for 4-9 years olds in new environments.

Systematic Desensitization \leftarrow

- Gradual exposure to fear-inducing stimuli reduces anxiety.
- This involves relaxation techniques and a ranked inventory of fears.

Pharmacological Techniques ← ★ ₩ ♠

- Anxiolysis with nitrous oxide aids in reducing anxiety for difficult patients.
- Conscious sedation may complement BMTs for better communication and care.

Alternative Modern Approaches

- Child-centered care includes techniques like magic tricks and hypnosis.
- Memory reconstructing strategies aim to alter children's perceptions positively.





BEHAVIOR MANAGEMENT IN PEDIATRIC DENTISTRY



Importance of Behavior Management

- Behavior management is crucial for successful pediatric dentistry.
- It helps children learn appropriate behavior and reduces anxiety during dental visits.



- BMTs have evolved alongside societal expectations of children and parents.
- Individualization and flexibility in techniques cater to each child's unique needs.

Key Non-Pharmacological Strategies

- Distraction methods include music, cartoons, and verbal diversions.
- Changing control allows children to communicate needs through signals.

Protective Stabilization Techniques

- Protective stabilization restricts movement to ensure safety during treatment.
- Requires explicit consent and should not be used as punishment.



Parental Involvement

- Setting limits on parental participation fosters a supportive environment.
- Parental acceptance of techniques can influence their effectiveness.





What is behavior management in pediatric dentistry?





Behavior management is essential for the success of pediatric dentistry, as it helps children learn appropriate behaviors and coping skills, reduces anxiety, and facilitates oral health care delivery.





What are Behavior Management Techniques (BMTs)?





BMTs are strategies based on understanding children's social, emotional, and cognitive development to enhance communication and establish behavioral guidelines during dental treatment.





What is the purpose of nonpharmacological techniques in behavior management?





Non-pharmacological techniques aim to reduce anxiety and improve cooperation through methods like Tell Show Do, voice control, modeling, and distraction.





What does the Tell Show Do (TSD) technique involve?





The TSD technique involves three phases: telling the child about a procedure in an age-appropriate way, showing the procedure using sensory modalities, and then doing the procedure while providing positive reinforcement.





How does voice control function as a behavior management technique?





Voice control modulates tone, volume, and pace of speech to guide children's behavior and can suppress disruptive actions effectively, especially when combined with nonverbal cues.





What is behavior shaping, and how does it work?





Behavior shaping modifies behavior through reinforcement, strengthening desired behaviors and limiting undesirable ones, with immediate and consistent application being essential for effectiveness.





What role does modeling play in pediatric behavior management?





Modeling involves children learning behaviors by observing and imitating others, particularly effective when the models are peers or individuals with perceived status.





What is the significance of distraction in pediatric dentistry?





Distraction techniques redirect a child's attention away from fear-inducing stimuli, using methods like cartoons, music, and magic tricks to alleviate anxiety during dental procedures.





What is systematic desensitization, and how is it implemented?





Systematic desensitization reduces anxiety by gradually exposing a child to anxiety-inducing stimuli while they practice relaxation techniques, following a structured approach.





What precautions should be taken when using protective stabilization in pediatric patients?





Protective stabilization should only be used with explicit informed consent and is intended to ensure safety during treatment; it must not be used as a punishment and should consider the child's emotional needs.



PEDODONTICS

CHILD ABUSE MANAGEMENT



MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA

Effects of Abuse and Neglect ←

- Long-term physical and emotional effects on children.
- Signs may include various physical symptoms and disclosures from the child.

Physical Abuse ←

- Typical signs can include bruising and injuries in vulnerable parts of the body.
- Mnemonics like TEN-4 and TEN-4-FACES assist in recognizing concerning bruises.

Medical Child Abuse (MCA) ←

- MCA involves unnecessary medical treatment due to caregiver's fabrication of illness.
- Diagnosis requires thorough investigation of medical history and patterns.

Understanding Dental Neglect

- Dental neglect is a common type of abuse; can be chronic and difficult to identify.
- Factors to diagnose neglect include access to care and wilful failure to seek treatment.

Recommendations for Reporting

- Mandated reporting obligations for pediatricians and dental professionals.
- Interdisciplinary collaboration recommended for the handling of suspected abuse cases.

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MIND MAP

CHILD ABUSE MANAGEMENT



Understanding Child Abuse

- Child abuse includes intentional and unintentional harm by caregivers.
- Defined categories: physical, emotional, sexual abuse, and neglect.

Identifying Abuse

- Importance of awareness among pediatricians and dental professionals regarding signs of abuse.
- Challenges in identifying and reporting suspected abuse.

Sexual Abuse

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- Oral cavity often a site of abuse; signs may include STI symptoms.
- A Important considerations for testing include child history and presence of visible injuries.

Bite Marks and their Implications

- Bite marks on skin can indicate abuse; forensic odontologists help in evaluation.
- Specific patterns and sizing help differentiate human bites from animal bites.

Role of Dental Professionals

- Dentists must recognize and report symptoms of child abuse to authorities.
- They play a crucial role in assessing and documenting signs of abuse.

Child Protection Actions

- Dentists should know the proper actions to take when abuse is suspected.
- Training and education on recognizing child maltreatment for healthcare professionals is essential.









What is the definition of child abuse and neglect?





Child abuse and neglect refer to intentional and nonintentional behaviors by parents, caregivers, or adults in positions of responsibility that result in harm to a child, either physically or emotionally.





What are the four categories of child abuse?





The four categories of child abuse are physical abuse, emotional abuse, sexual abuse, and neglect.





What does the mnemonic TEN-4 help identify?





The mnemonic TEN-4 assists in identifying bruises concerning for abuse in children, specifically bruises on the torso, ear, or neck in children 4 years or younger, and in any infant under 4 months.





What are common signs of sexual abuse in children that dentists and pediatricians should be aware of?





Signs of sexual abuse may include a history of oral-genital contact, evidence of penetrative injury, and signs or symptoms of sexually transmitted infections (STIs).





How is Medical Child Abuse (MCA) primarily characterized?





Medical Child Abuse (MCA), also known as "Munchausen syndrome by proxy," is characterized by a caregiver subjecting a child to unnecessary medical care due to exaggeration or fabrication of illness.





What are the typical signs that might indicate dental neglect?





Signs of dental neglect may include a child being harmed due to lack of dental care, repeated missed appointments, returning in pain, and the need for general anesthesia for dental extractions.





What should pediatricians and dental professionals do if they suspect child abuse or neglect?





They must report injuries concerning for abuse or neglect to child protective services according to local or state legal requirements.





What physical evidence may indicate child abuse?





Physical evidence of child abuse may include bite marks, bruises, burns, lacerations, dental neglect, and injuries in various stages of healing.





What is a common challenge in recognizing Medical Child Abuse?





Diagnosing Medical Child Abuse can be challenging due to false information provided by caregivers and the need for thorough review of voluminous medical records.





What role do forensic odontologists play in cases of suspected abuse?





Forensic odontologists assist in the detection and evaluation of bite marks related to physical and sexual abuse, helping to identify patterns and document injuries.



PEDODONTICS

SPORTS DRINKS & MOUTHGUARDS



MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA

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Types of Mouthguards ←

- Custom-made mouthguards are formed from the wearer's dental cast.
- Bimaxillary mouthguards are suitable for boxing and martial arts.

Functions of Mouthguards \leftarrow \bigwedge

- Reduce dental injuries during participation in high-risk sports.
- Mouthguards should be part of a child's sports uniform.

Sports Drinks and Their Effects

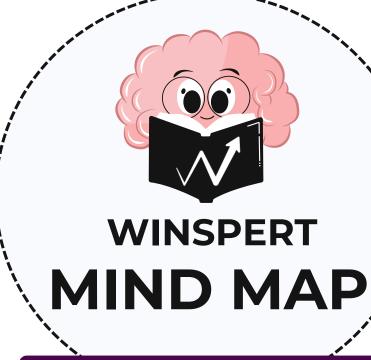
- Sports drinks are important for hydration and energy.
- High sugar content in sports drinks can lead to dental problems.

Recommendations for Athletes +

- Water is preferable to sports drinks to prevent dental caries.
- Use of non-cariogenic sweeteners like xylitol is advised during sports.

Conclusion

• Properly fitted mouthguards and smart consumption of sports drinks are key to protecting dental health during sports activities.



SPORTS DRINKS AND MOUTHGUARDS

Importance of Mouthguards

- Mouthguards protect the teeth and jaws from injuries.
- Custom mouthguards are essential for children in contact sports.



- Dual-laminated mouthguards offer two stages of protection.
- Tri-laminated mouthguards are ideal for adult sports.

Maintenance of Mouthguards

- Custom mouthguards should be routinely cleaned to avoid plaque buildup.
- Replace mouthguards regularly for best fit and protection.

Erosive Potential of Sports Drinks

- Sports drinks can be acidic and erosive to tooth surfaces.
- The combination of mouthguards and sports drinks can diminish erosive efects

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Guidelines for Usage

- ADA recommends tailored mouthguards for all contact sport participants.
- A Athletes should maintain oral hygiene even when wearing mouthguards.





What is a mouthguard and its purpose in contact sports?





A mouthguard is a protective device worn in the upper jaw and sometimes the lower jaw to reduce injuries to the teeth, jaws, and associated soft tissues in contact sports.





What is the significance of professionally fitted custom-made mouthguards?





Professionally fitted custom-made mouthguards are important for injury prevention in people involved in contact sports as they provide better protection for injury-prone dentition.





When should children start wearing custom fitted mouthguards?





Children should start wearing custom fitted mouthguards as soon as they begin participating in organized contact sports.





What are the general design principles of mouthguards?





There are different types of mouthguards, including custom made mouthguards, bimaxillary mouthguards, laminated mouthguards, mouth formed mouthguards, and stock mouthguards.





What are custom made mouthguards?





Custom made mouthguards are formed on the cast of the upper jaw (and sometimes the lower jaw) to obtain even occlusal contact and are the most acceptable type for protection.





What are laminating mouthguards and how do they differ from other types?





Laminated mouthguards offer flexibility in design and construction by layering ethyl vinyl acetate (EVA) of different hardness and thickness for increased protection.





What is a "boil and bite" mouthguard?





A "boil and bite" mouthguard is available over the counter, softened in hot water, and formed in the mouth using finger, tongue, and biting pressure for a customized fit.





How long do different types of custom-made mouthguards last?





Dual-laminated custom-made mouthguards can be light or medium types designed for different uses, while trilaminated custom-made mouthguards are best suited for stable adult teeth in high-impact sports.





Why is the consumption of sports drinks concerning for athletes wearing mouthguards?





Sports drinks have acidic and erosive potential, and wearing a mouthguard while consuming them can lead to dental caries due to entrapment of the drink beneath the mouthguard.





What oral hygiene practices should be followed by athletes using mouthguards?



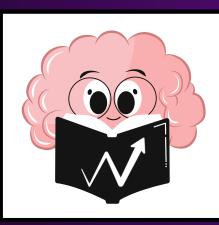


Athletes should promote oral hygiene as dental plaque can accumulate on the tooth surface when using mouthguards, and it is recommended to consume water or non-cariogenic sports drinks while wearing them.



PEDODONTICS

CHILDHOOD SYSTEMIC DISEASES AND INFECTIOUS DISEASES



MIND MAP & CUE CARDS



BY DR. JIGYASA SHARMA

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Differences Between Adults and Children

- Pathology often presents distinctly in children.
- Lesions may evolve as children grow, impacting diagnosis.

Odontogenic Infections ←

- Acute infections are emergencies: high fever and facial swelling.
- Chronic infections may show minor symptoms like halitosis.

Management of Gingivostomatitis

- Treatment is usually symptomatic; condition is self-limiting.
- Ulcers typically heal within 10-14 days without scarring.

Infectious Mononucleosis

- Caused by Epstein-Barr virus; common in teens and young adults.
- Symptoms include fever, malaise, and mouth ulcers.

Acute Pseudomembranous Candidiasis

- Thrush is the common presentation in infants.
- Can occur in older children due to immunocompromised states.



WINSPERT MIND MAP

CHILDHOOD SYSTEMIC DISEASES AND INFECTIOUS DISEASES



Oral Pathology in Children

- Oral lesions may indicate systemic disorders.
- Most oral pathologies in children are benign but require careful evaluation.



Diagnosing Oral Lesions

- Multiple diseases can present similarly (e.g., ulcers).
- A thorough clinical examination s crucial for accurate diagnosis.



Primary Herpetic Gingivostomatitis

- Caused by herpes simplex type 1, common in young children.
- Symptoms include irritability, foul breath, and oral ulcers.



Herpangina and Hand, Foot, and Mouth Disease

- Caused by Coxsackie viruses; mild symptoms in children.
- Vesicles appear on the mouth and extremities, healing within 10 days.



Varicella Infection

- Highly contagious chickenpox virus; can also cause shingles.
- Oral lesions occur in about 50% of chickenpox cases.



Common Traumatic Ulcerations

- A Lip ulceration from mandibular block anesthesia i common.
- Riga-Fede ulcer is seen in children with cerebral palsy, needing tailored management.





What are the common signs of acute oral infection in children?





The common signs of acute oral infection in children include a sick, upset child, raised temperature, red and swollen face, and anxious, distressed parents.





How does chronic oral infection typically present in children?





Chronic oral infection typically presents as an asymptomatic or indolent process, which may include the presence of a sinus, a mobile tooth, or halitosis, along with discolored teeth.





What is the most common cause of severe oral ulceration in children?





The most common cause of severe oral ulceration in children is primary herpetic gingivostomatitis, caused by herpes simplex type 1 virus.





What are the typical symptoms of primary herpetic gingivostomatitis in children?





Typical symptoms include irritability, fever, malaise, difficulty in eating and drinking, drooling, red and edematous gingival tissues, and the presence of painful ulcers.





How do herpangina and hand, foot, and mouth disease present clinically?





Both herpangina and hand, foot, and mouth disease present with a prodromal phase of low-grade fever and malaise, followed by vesicle formation, with herpangina usually showing a cluster of vesicles on the palate and hand, foot, and mouth disease showing vesicles on the mouth, hands, and feet.





What virus causes infectious mononucleosis, and what are its main symptoms?





Infectious mononucleosis is caused by the Epstein-Barr virus (EBV), and its main symptoms include malaise, fever, lymphadenopathy, and acute pharyngitis.





What is the cause of varicella (chickenpox), and how does it typically present in terms of oral lesions?





Varicella (chickenpox) is caused by a highly contagious virus, and oral lesions occur in about 50% of cases, typically presenting as few vesicles in the mouth.





What is thrush in infants, and how does it present?





Thrush is the most common presentation of Candida infection in infants, characterized by white plaques that reveal an erythematous, sometimes hemorrhagic, base upon removal.





What causes lip ulceration after mandibular block anesthesia in children?





Lip ulceration after mandibular block anesthesia is commonly caused by trauma from biting the lips, and parents should be warned about this potential issue.





What is Riga-Fede ulceration, and in which patient population is it most commonly found?





Riga-Fede ulceration is an ulceration of the ventral surface of the tongue caused by trauma from continual movements over the lower incisors, most commonly found in children with cerebral palsy.