GINGIVAL DISEASES OF CHILDHOOD

CONTENTS

INTRODUCTION

- Children are exposed to various gingival diseases, similar to those found in adults, yet differ in some aspects.
- It is crucial to diagnose and manage gingival diseases as early as possible as they have the potential to further progress, causing a severe breakdown of periodontal support.

- Therefore, greater emphasis is given to the prevention, early diagnosis, and treatment of gingival disease in children.

NORMAL PERIODONTIUM

WHAT IS DIFFERENT ?

FEATURES	CHILDREN	ADULTS
Gingival Colour	More Reddish	Pink
Contour	Free Gingival Margin-rounded	Gingival Margin- Knife Edge
Consistency	Flabby.	Firm And Resilient
Surface Texture	Stippling Absent In Infancy. Mostly Seen By Age Of 6yrs	Stippling Present
Interdental area	Saddle shaped gingiva	Papillary gingiva
Gingival sulcus	Shallow than permanent	2-3 mm
Attached gingiva	Width increases with age	Greater in adults

GINGIVAL DISEASES CLASSIFICATION

Eruption Gingivitis

Chronic Nonspecific Gingivitis.

Dental Plaque Induced Gingivitis

Acute gingival disease

- Herpes Simplex Virus Infection.
- Recurrent Apthous Ulcer
- NUG
- Acute Candidiasis

Gingival Diseases Modified By Systemic Factors

- Gingival Diseases Associated With The Endocrine System
- Gingival Lesions of Genetic Origin.
- Drugs Induced Gingival Overgrowth.
- Ascorbic Acid Deficiency Gingivitis (Scorbutic Gingivitis)

GINGIVAL DISEASES

ERUPTION GINGIVITIS

- Gingivitis associated with tooth eruption.
- Tooth eruption usually does not cause gingivitis, however inflammation associated with plaque accumulation around erupting tooth.
- Perhaps secondary to discomfort caused by brushing these friable areas, may contribute to gingivitis.

TREATMENT

Red and swollen gums are normal for a teething infant. Photo Credit John Foxx/Stockbyte/Getty Images

- Complete dental care and improve oral hygiene.

DENTAL PLAQUE INDUCED GINGIVITIS

- It is the most common form of gingivitis without loss of attachment or bone.
- Local factors contributing to gingivitis in children
  - Crowded teeth
  - Orthodontic appliances

It is classified as:-

- Initial
- Early
- Moderate
- advanced

REVERSIBLE

Periodontal health

Supra-gingival plaque develops and accumulates

Gingivitis

Crevice deepens and plaque extends sub-gingivally

Periodontitis

Plaque removal

May progress

Irreversible

Stages of gingivitis

stage	Initial stage	Early stage	Established stage
Time (days)	2-4	4-7	14-21
Blood vessels	Vascular dilatation	Vascular proliferation	Vascular proliferation, Blood stasis
Junctional & Sulcular epi.	Infiltration by PMNs	Same as stage 1,	Same but more advanced
Predominant immune cells	PMNs	Lymphocytes	Plasma cells
Collagen	Perivascular loss	Increased loss	Continuous loss
Clinical findings	Gingival fluid flow	Erythema, Bleeding on probing	Changes in color, texture, size

ACUTE GINGIVAL DISEASE

PRIMARY HERPETIC GINGIVOSTOMATITIS

- Caused by Herpes simplex virus type 1
- Age-Children younger than 6 yrs, but also may be seen in adolescents and adults.
- Primary infection is asymptomatic
- Location- lesions mainly involve hard palate, attached gingiva and oral mucosa.
- Duration of course- 10 to 14 days.
- Manifestations include blister outside the lip so disease commonly called recurrent herpes labialis.

- Oral findings:
- Diffuse Erythematous gingiva
- Yellow or white fluid vesicles
  - Generalized soreness
  - Ruptured vesicles – focal site of pain
  - Infants show irritability and refusal to eat
  - Pain upon swallowing
- Extra oral findings:
  - Cervical lymphadenopathy
  - Fever (101- 105℃)
  - Generalized malaise, irritability

TREATMENT

- Specific antiviral therapy
- Application of a mild topical anesthetic
- Soft food
- Vitamin supplements
- Bed rest
- Isolation from other children.

RECURRENT APHTHOUS ULCER
(CANKER SORE)

- It is a painful ulceration on the unattached mucous membrane that occurs in school-aged children and adults.
- The peak age is between 10 and 19 years of age.
- Characterized by :

➢ Recurrent ulcerations on the moist mucous membranes of the mouth, in which both discrete and confluent lesions form rapidly in certain sites and feature .

➢ Round to oval crateriform base, raised reddened margins, and pain.

ETOLOGICAL FACTORS

- The cause of Recurrent apthous ulcer is unknown . But it is possible that the lesions are caused by :
- Local and systemic conditions & gastrointestinal disorders.
- Genetic predisposition.
- Immunologic and infectious microbial factors.
- Delayed hypersensitivity to the L form of *streptococcus sanguis,*
- Autoimmune reaction of the oral epithelium.
- Stress
- Vitamin deficiencies.

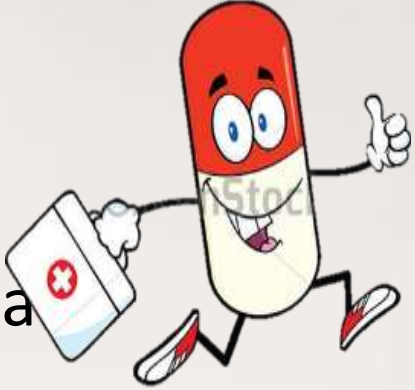
TREATMENT

- Symptomatic treatment
- Topical corticosteroid triamcinolone 3-4 times daily by rinse and expectorate method.
- Nutritional diet.
- Maintenance of oral hygiene.

NECROTIZING ULCERATIVE GINGIVITIS (VINCENT INFECTION)

- Rare among preschool children occurs occasionally in children 6 to 12 years old, and is common in young adults.
- Punched out crater like depression at crest of interproximal papillae and the presence of a pseudomembranous necrotic covering of the marginal tissue.
- clinical manifestations:-
  - Inflamed, painful, bleeding gingival tissue,
  - Poor appetite
  - Temperature as high as 40°C (104°F),
  - General malaise and a fetid odor.

TREATMENT



- Perform debridement under local anaesthesia
- Remove pseudomembrane.
- Patient counselling should include specific oral hygiene instructions, instruction on proper nutrition,
- For any signs of systemic involvement, the recommended antibiotics are:
  - Amoxicillin, 20-25 mg/kg /day in 3 divided doses
  - Metronidazole, 30-50 mg/kg/day in 3 divided doses

ACUTE CANDIDIASIS
(THRUSH,CANDIDOSIS,MONILIASIS)

- Neonatal candidiasis, contracted during passage through the vagina and erupting clinically during the first 2 weeks of life, is a common occurrence. This infection is also common in immunosuppressed Patients.

- The lesions of the oral disease appear as raised, furry, white patches, which can be removed easily to produce a bleeding underlying surface.

- sometimes develop thrush after local antibiotic therapy .

TREATMENT

Antifungal antibiotics control thrush.

- Nystatin suspension of 1 mL (100,000 U) may be dropped into the mouth for local action QID
- Clotrimazole suspension (10 mg/mL), 1 to 2 mL QID
- Systemic fluconazole suspension (10 mg/mL)

CHRONIC NONSPECIFIC GINGIVITIS

- A type of gingivitis commonly seen during the pre-teenage and teenage years .
- May be localized to the anterior region, or it may be more generalized.
- Although the condition is rarely painful, it may persist for long periods without much improvement

- The fiery red gingival lesion is not accompanied by enlarged interdental labial papillae or closely associated with local irritants

TREATMENT

- An improved dietary intake of vitamins and the use of multiple-vitamin supplements will improve the gingival condition in many children.

- Improved oral hygiene.

Gingival Diseases Modified By Systemic Factors

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GINGIVAL DISEASES ASSOCIATED WITH THE ENDOCRINE SYSTEM

- Puberty gingivitis occurs in prepubertal and pubertal period.
- The gingival enlargement was marginal in distribution and, in the presence of local irritants, was characterized by prominent bulbous inter proximal papillae far greater than gingival enlargement.
- Anterior segment and may be present in only one arch.
- The lingual gingival tissue generally remains unaffected .

TREATMENT

- Improved oral hygiene,
- Removal of all local irritants,
- Adequate nutritional status
- Severe cases treated by gingivoplasty

GINGIVAL LESIONS OF GENETIC ORIGIN

- Hereditary gingival fibromatosis (HGF) is characterized *by* slow, progressive, benign enlargement of the gingivae and has an autosomal dominant mode of inheritance .
- Elephantiasis gingivae or hereditary hyperplasia of the gums.
- The gingival tissues appear normal at birth but begin to enlarge with the eruption of the primary teeth.
- continue to enlarge with eruption of the permanent teeth until the tissues essentially cover the clinical crowns of the teeth

- Dense fibrous tissue often causes displacement of the teeth and malocclusion
- The condition is not painful until the tissue enlarges to the extent that it partially covers the occlusal surface of the molars and becomes traumatized during mastication.
- Treatment: Surgical removal of the hyperplastic tissue
- Can recur within a few months after the surgical procedure

DRUG-INDUCED GINGIVAL ENLARGEMENT

- Drug-induced gingival enlargement:
  - Anticonvulsant – phenytoin Na
  - Immunosuppressant - cyclosporine
  - Calcium channel blocker - amlodipine

- Clinical and microscopic features of enlargement caused by different drugs are similar.

- The growth starts as a painless, beadlike enlargement of the interdental papilla and extends to the facial and lingual margins.

- As the condition progress, marginal and papillary enlargement units and may develop into a massive tissue fold.

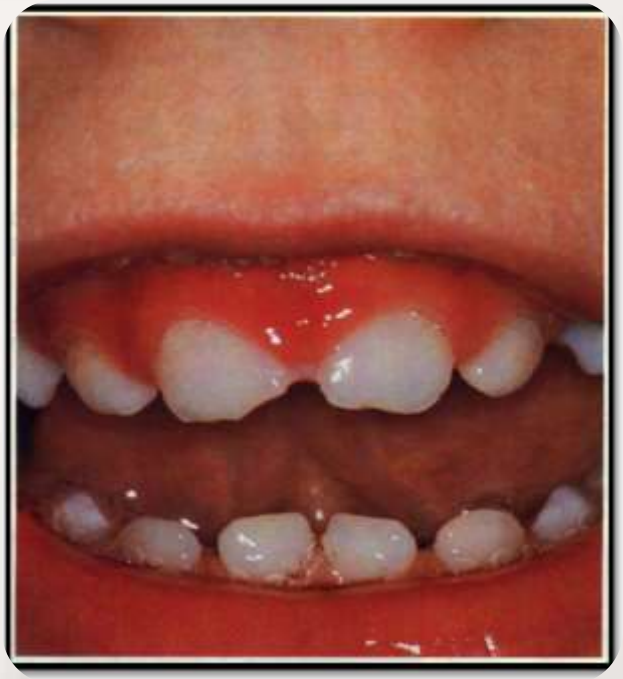
- May interfere with occlusion.

Treatment modalities

Mild – < 1/3 of clinical crown	Oral hygiene maintenance and frequent dental care
Moderate- 1/3 to 2/3 of clinical crown	Oral hygiene Antiplaque mouth rinse 4 consecutive weekly office visits for prophylaxis, 5th week- evaluate the gingiva If no improvement – surgical correction
Severe – > 2/3 of clinical crown	If does not respond above treatment. Surgical correction is done -meticulous oral hygiene is essential . Surgical procedure:- gingivectomy, laser, or electrosurgery.

ASCORBIC ACID DEFICIENCY GINGIVITIS

- Associated with vitamin C deficiency
- Involves marginal and papillary gingiva in the absence of local predisposing factors
- Complains of severe pain and spontaneous hemorrhage
- Treatment: Complete dental care, improved dental hygiene, and supplementation with vitamin C – improves gingival conditions



CONCLUSION

- ✓ Gingivitis is a reversible disease. Therapy is aimed primarily at reduction of etiologic factors to reduce or eliminate inflammation, thereby allowing gingival tissues to heal.
- ✓ Complete dental care, improved oral hygiene, and supplementation with vitamin c and other water-soluble vitamins will greatly improve the gingival condition.
- ✓ As with all disorders affecting periodontal tissues, maintaining excellent oral hygiene is the primary key to successful therapy.

REFERENCES

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THANK YOU