# CLASSIFICATION OF GINGIVAL DISEASES

Department of Periodontology

# LEARNING OBJECTIVE

- To understand the need for classification
- to understand the classification of gingival diseases

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OBJECTIVES

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-INTRODUCTION

-NEED FOR CLASSIFICATION
-PARADIGMS OF CLASSIFICATION
-CLASSIFICATION OF GINGIVAL DISEASE
TAKE HOME MESSAGE

- Overlapping clinical situations and exceptions to the rule certainly exist and pose challenges to the clinicians during diagnosis, prognosis and treatment planning.

- Clinical significance of making the diagnosis of disease conditions is best supplemented by a proper classification.

- Classification systems are necessary in order to provide a framework to study→ etiology, pathogenesis, and treatment of diseases.

- In addition, such classification systems help clinicians to understand biologic mechanism of pathogenesis of periodontal diseases which coupled with clinical observations will permit improved clinical investigations that ultimately improves therapeutic approaches of treating a disease.

# Long-standing Dilemma

- No matter how carefully classification is developed, and how much thought and time are invested, choices need to be made between equally unsatisfactory alternatives.
- Despite this dilemma, in past hundred years, experts have periodically assembled to develop a new classification system for periodontal diseases, or to refine an existing one

# Historical Development Of Classification Systems

Based on :

- Clinical features of the diseases (1870–1920),
- Concepts of classical pathology (1920–1970),
- Infectious etiology of the diseases (1970–present).

- C.G. Davis 1879 believed there were *three distinct* forms of destructive periodontal disease:

*Gingival recession with minimal or no inflammation*.

- This was due to 'feeble vascular action' and trauma from tooth brushing or other sources.

*Periodontal destruction secondary to 'lime deposits'.*

- 'The gum retires slowly and the alveolar border, deprived of nutrition at the point of pressure, is constantaneously absorbed.' Davis apparently believed that calculus exerted mechanical pressure on gingiva causing alveolar bone to resorb because of lack of nutrition.

*'Riggs' Disease' the hallmark of which was, 'loss of alveolus without loss of gum.'*

- Perceived problem was a 'necrosed alveolus' or death of the periodontal membrane. '... OR
- As is believed by some, among them Dr Waters, of Boston, the alveolus is destroyed by vegetable parasites'.

- Similarly, in 1886 G.V. Black published five separate groups.

*Constitutional gingivitis*:

Mercurial gingivitis, potassium iodide gingivitis and scurvy.

*Painful form of gingivitis*:

Black described a clinical condition that resembled what is now termed necrotizing ulcerative gingivitis (NUG), but he never used the term.

*Simple gingivitis*:

This was associated with the accumulation of debris that eventually led to 'calcic inflammation of the peridental membrane.'

*Calcic inflammation of the peridental membrane*:

- Associated with ‘salivary’ and/or ‘serumal’ calculus. Usually even or generalized pattern of destruction of alveolar bone. Destruction usually occurred slowly. Black’s description best fits the periodontal disease that is now known as chronic periodontitis.

*Phagedenic pericementitis* (phagedenic—spreading ulcer or necrosis).

- Shared many features with ‘calcic inflammation of peridental membrane’ but there was an irregular pattern of destruction and not much dental calculus. Destruction of the alveolar bone can occur slowly or rapidly. In a later publication Black replaced the term ‘phagedenic pericementitis’ with ‘chronic suppurative pericementitis’

- Principles of general pathology, three major tissue reactions→ inflammatory; dystrophic; neoplastic. *Neoplastic changes are not in the therapeutic realm of periodontics.
- ‘Environmental factors, however, dictate inclusion of a third and different category of pathologic reaction in periodontology and pathologic reactions produced by occlusal trauma’.

## Classification of Periodontal Diseases and Conditions Based on the "Infection/Host Response Paradigm" (1999 International Workshop for a Classification of Periodontal Diseases and Conditions) [3]

**I. Gingival Diseases**

A. Dental Plaque-Induced Gingival Diseases*
1. Gingivitis associated with dental plaque only
   a. without other local contributing factors
   b. with local contributing factors (See VIII. A.)
2. Gingival diseases modified by systemic factors
   a. associated with the endocrine system
      1) puberty-associated gingivitis
      2) menstrual cycle-associated gingivitis
      3) pregnancy-associated
         a) gingivitis
         b) pyogenic granuloma
      4) diabetes mellitus-associated gingivitis
   b. associated with blood dyscrasias
      1) leukemia-associated gingivitis
      2) other
3. Gingival diseases modified by medications
   a. drug-influenced gingival diseases
      1) drug-influenced gingival enlargements
      2) drug-influenced gingivitis
         a) oral contraceptive-associated gingivitis
         b) other
4. Gingival diseases modified by malnutrition
   a. ascorbic acid-deficiency gingivitis
   b. other

B. Non-Plaque Induced Gingival Lesions

1. Gingival diseases of specific bacterial origin
    a. *Neisseria gonorrhea*-associated lesions
    b. *Treponema pallidum*-associated lesions
    c. streptococcal species-associated lesions
    d. other
2. Gingival diseases of viral origin
    a. herpesvirus infections
        1) primary herpetic gingivostomatitis
        2) recurrent oral herpes
        3) varicella-zoster infections
    b. other
3. Gingival diseases of fungal origin
    a. *Candida*-species infections
        1) generalized gingival candidiasis
    b. linear gingival erythema
    c. histoplasmosis
    d. other
4. Gingival lesions of genetic origin
    a. hereditary gingival fibromatosis
    b. other

5. Gingival manifestations of systemic conditions
    a. mucocutaneous disorders
        1) lichen planus
        2) pemphigoid
        3) pemphigus vulgaris
        4) erythema multiforme
        5) lupus erythematosus
        6) drug-induced
        7) other
    b. allergic reactions
        1) dental restorative materials
            a) mercury
            b) nickel
            c) acrylic
            d) other
        2) reactions attributable to
            a) toothpastes/dentifrices
            b) mouthrinses/mouthwashes
            c) chewing gum additives
            d) foods and additives
        3) other
6. Traumatic lesions (factitious, iatrogenic, accidental)
    a. chemical injury
    b. physical injury
    c. thermal injury
7. Foreign body reactions
8. Not otherwise specified

# Conclusion

- With our increasing knowledge of bacteria associated with periodontal infections, genetic factors controlling the host responses, it would seem that a more etiological classification could be devised.

- Before which a number of fundamental breakthroughs will have to occur in understanding of host microbial interactions and the environmental factors that affect them.

# TAKE HOME MESSAGE

- classification is important to understand the types of gingival/periodontal diseases

# PROBABLE SAQS AND LAQS

- 1)Which one of the following comes under functionally induced disease

A)Acute abscess

B)Tarumatic occlusion

C)pericoronitis

D)Anug

2)which periodontal disease is modified by malnutrition

A)recurrent oral herpes

B)vericella zoster infection

C)Scurvy infection

D)Linear gingival erythema

3)which one of the following does not come under periodontal manifestation of systemic disease

- A)downs syndrome
- B)erythema multiform
- C)hypophasphatasia
- D)chidiak higashi syndrome

4)Following are the abscesses of periodontium

A)gingival abscess

B)periodontal abscess

C)pericoronal abscess

D) all of the above

5)Following comes under traumatic lesion accept one

A)chemical injury

B)mercury induced

C)physical injury

D)thermal injury

6)which one is not of fungal origin

A)linera gingival erythema

B)histoplasmosis

C)generalised gingival candidosis

D)primary herpetic gingivostomatitis

7)which one of the following periodontal diseases is of genetic origin

A)varicella zoster

B)histoplamosis

C)linear gingival erythema

D)heriditary gingival fibromatosis

Recent classification of periodontal disease organised by American Academy of periodontology was given in year

A)1989

B)1997

C)1998

D)1999

9)Most common periodontal disease is

A)gingivitis

B)periodontitis

C)gingival hypertrophy

D)juvenile peruodontitis

10)which one of the following is most common in school children

A)herpetic gingivostomatitis

B)Anug

C)gingivitis

D)juvenile periodontitis

- SAQ/LAQ:
  1.Need fpr clasification,and write about classification of gingival diseases.