

Diseases Of Periodontium

Department of oral pathology
Microbiology

Learning Objectives

At the end of lecture student should be able to

1. Define Chronic Periodontitis,
2. Describe etiology and clinical features of Chronic Periodontitis
3. Define Aggressive Periodontitis
4. Describe etiology and clinical features of Aggressive Periodontitis
5. Define Necrotising Ulcerative Periodontitis
6. Describe etiology and clinical features of Necrotising Ulcerative Periodontitis

Periodontitis

Definition

Inflammation of supporting tissues of teeth. Usually a progressively destructive change leading to loss of bone and periodontal ligament. An extension of inflammation from gingiva into the adjacent bone and ligament.

Periodontitis

- Considered to be a multifactorial disease in which the normal balance between microbial plaque and host response is disrupted due to:
 - Changes in plaque composition.
 - Changes in the host response.
 - Environmental and behavioral influences that can affect both plaque and host response
 - Possible genetic basis to the susceptibility to periodontal disease.

Chronic Periodontitis

Definition:

An infectious disease resulting in inflammation within the supporting tissues of the teeth, progressive attachment and bone loss.

Replaces the older term "adult periodontitis" or "chronic adult periodontitis"

Chronic Periodontitis

Characteristics:

- Most prevalent in adults, but can occur in children and adolescents.
- Amount of destruction is consistent with the presence of local factors.
- Associated with variable microbial pattern.
- Slow to moderate rate of progression, but may have period of rapid progression.

Characteristics: (cont')

- Can be further classified on the basis of extent and severity.
- Can be associated with local predisposing factors (e.g., tooth-related or iatrogenic factors).
- May be modified by and /or associated with systemic diseases (e.g., diabetes mellitus, HIV infection).
- Can be modified by environmental factors such as cigarette, smoking and emotional stress.

Chronic Periodontitis

Clinical Features:

- Supra- & sub- gingival plaque accumulation that is frequently associated with calculus formation.
- Gingival inflammation:
 - Color:
 - range from pale-red to magenta.
 - Consistency:
 - Slightly-moderate swollen (edematous)



Chronic Periodontitis

Clinical Features: (cont.)

- Periodontal pocket formation with variable depth.
- Bleeding upon probing
- Tooth mobility (often appears in advanced cases when bone loss has been considerable).
- Horizontal and/or vertical bone loss.



Chronic Periodontitis

Disease Distribution:

- chronic periodontitis is a SITE-SPECIFIC DISEASE:
 - clinical signs of chronic periodontitis are considered to be due to the direct, site specific effect of subgingival plaque accumulation
 - therefore, clinical signs of disease may occur on one surface of a tooth while other surfaces maintain normal attachment level.



Chronic Periodontitis

Distribution & Severity:

Extent

- Localized <30% of sites affected.
- Generalized >30% of sites affected

Severity

- Slight (early): 1-2 mm CAL(clinical attachment level)
- Moderate: 3-4 mm CAL
- Severe (advanced): >5 mm CAL

Chronic Periodontitis

How to write the diagnosis statement:

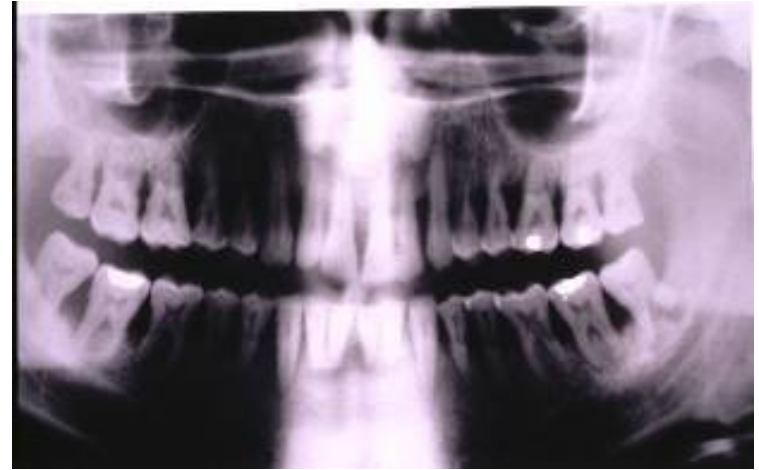
Extent + Severity + Chronic Periodontitis

- Localized early/moderate/advanced chronic periodontitis
- Generalized early/moderate/advanced chronic periodontitis.

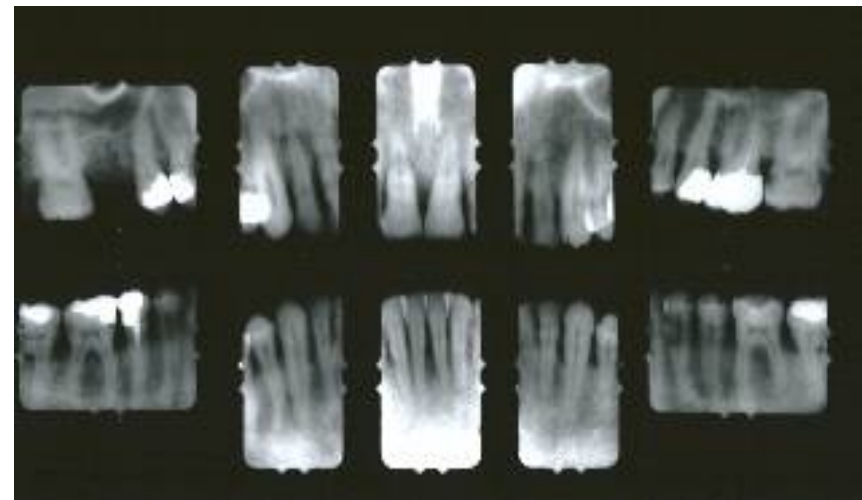
Chronic Periodontitis

- Most prevalent form of periodontitis.
- 53% prevalence using a threshold of CAL>3mm in at least one site.
- Prevalence Increase with age:
 - Age 30-39 35.7%
 - Age 80-90 89.2%

Chronic Periodontitis



Generalized Advanced Chronic Periodontitis



Aggressive Periodontitis

Definition:

A specific type of periodontitis with clearly identifiable clinical and laboratory findings that make it sufficiently different from Chronic Periodontitis.

Aggressive Periodontitis

COMMON features of Aggressive Periodontitis:

- Except for the presence of periodontitis, patients are otherwise **clinically healthy**.
- Rapid attachment loss and bone destruction.
- Familial aggregation

Aggressive Periodontitis

Features of Localized Aggressive Periodontitis
(formerly called
localized juvenile periodontitis):

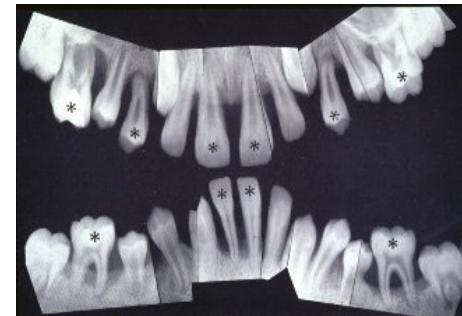
- Age of onset around puberty
- Robust serum antibody response to infecting agents.
- Clinically, Localized first molar/incisor presentation with inter-proximal attachment loss on at least two permanent teeth, one of which is a first molar and involving not more than two teeth other than first molars and incisors.

Aggressive Periodontitis

Features of Localized Aggressive Periodontitis

(cont.):

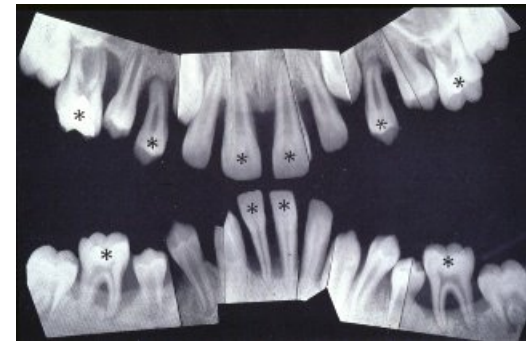
- Progress rapidly; rate of bone loss is 3-4 times faster than that of chronic periodontitis.
- Lack of clinical inflammation of the gingiva despite presence of deep periodontal pocket.
- The amount of plaque on the affected teeth is minimal which seems to be inconsistent with the amount of periodontal destruction.



Aggressive Periodontitis

Features of Localized Aggressive Periodontitis (cont.):

- Distolabial migration of the maxillary Incisors;
- Increase mobility of first molars.
- Pain characteristics are similar to that of chronic periodontitis.
- In some patients, progression of attachment loss and bone loss may be self-asserting.



Aggressive Periodontitis

Radiographic Features of Localized Aggressive Periodontitis (cont.):

Classic diagnostic sign:

- Vertical loss of bone around first molars and incisors beginning around puberty in otherwise healthy teenagers.
- Also, an arc-shaped loss of bone extending from the distal surface of second premolar to mesial surface of second molar



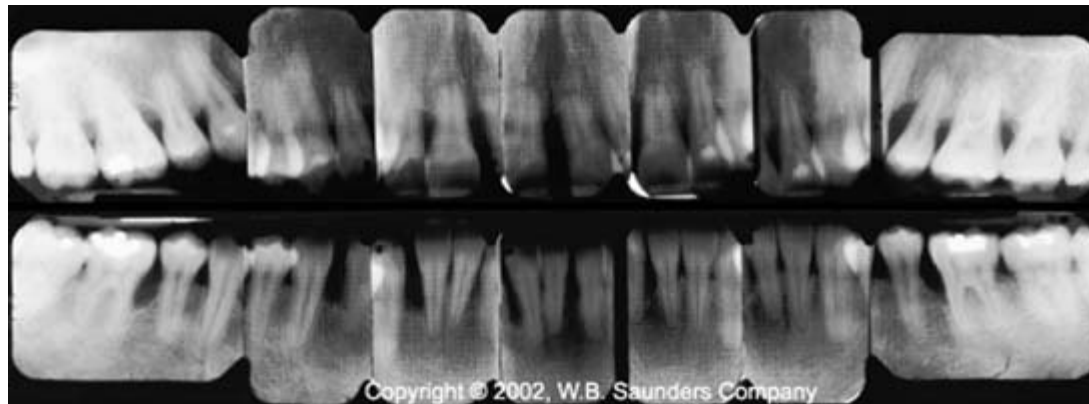
Aggressive Periodontitis

Features of Localized aggressive periodontitis (cont')

- Low prevalence: 0.1-0.5%
- Blacks are at higher risk than whites.
- Black males 2.9 times likely to have the disease than black females.
- White females more likely to have the disease than white males.

Aggressive Periodontitis

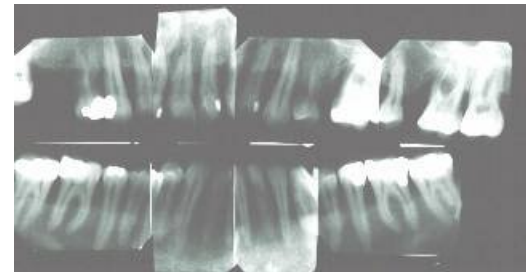
Case of Localized Aggressive Periodontitis
In 18-year-old female



Aggressive Periodontitis

Features of Generalized Aggressive Periodontitis: (formerly called generalized juvenile periodontitis or rapidly progressive periodontitis)

- Usually affecting persons under 30 years of age, but patients may be older.
- Poor serum antibody response to infecting agents.
- Pronounced episodic nature of the destruction of attachment and alveolar bone.



Aggressive Periodontitis

- Amount of plaque is not consistent with amount of periodontal destruction.
 - Blacks - Higher risk than whites

M>F



Refractory Periodontitis

Definition:

A condition where one or more forms of periodontitis are unresponsive to treatment despite excellent patient compliance and delivery of periodontal therapy that ordinarily is successful in arresting the progression of periodontitis.

Diseases of Supporting Structures, Refractory Periodontitis

A secondary descriptor used with various categories of periodontitis:

“Refractory Chronic Periodontitis”.

“Refractory Aggressive Periodontitis”.

Necrotizing Ulcerative Periodontal Diseases

- Signs and symptoms :
 - Necrosis and ulceration of coronal part of interdental papilla and /or gingival margins
 - Deep crater-like osseous lesions most often located interdentally
 - Pain.
 - Mouth malodor (halitosis).
 - Systemic manifestations;
 - Fever, malaise, and lymphadenopathy.



Summary

Definition, etiology, clinical features of

1. Chronic Periodontitis

2. Aggressive Periodontitis

3. Necrotising Ulcerative Periodontitis

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Thank you