



TECHNICAL NOTE

Majors highlights of the new 2017 classification of periodontal and peri-implant diseases and conditions



Over the last forty years, the American Academy of Periodontology had multiple classification of periodontal disease. However, many shortcomings in the 1977 classification were noticed such as the lack of clear categorization of gingival disease, similarities of microbiological and host response in some disease conditions and the restriction of the age factor to certain diseases. The 1999 classification of periodontal disease improved these shortcomings and was based on different clinical entities like necrotizing periodontitis, chronic periodontitis, aggressive periodontitis and periodontitis as a secondary manifestation of systemic disease. In the time period from 1977 to 1989, the classification transformed to include five categories of periodontal diseases in place of the traditional two categories in practice. The major changes from the 1977 to the 1989 classification were the addition of the effect of systemic diseases on periodontal conditions and early onset periodontitis.

Clinical and histological findings correlating with rapid loss of attachment and severe bone destruction either localized and generalized (> 30% of sites are involved) were considered as determinants for the diagnosis of aggressive periodontitis. Clinical cases not meeting these criteria were classified as chronic periodontitis. Substantial amount of new information from epidemiological and prospective studies evaluating the proposed systemic risk factors in chronic diseases have been included since then. The 2015 Task Force Report by the American Academy of Periodontology added other param-

eters to the 1999 Classification of Periodontal Diseases and Conditions such as radiographic bone loss in association with clinical attachment loss. Reduction of 1–2 mm CAL and up to 15% of root length or ≥ 2 mm & ≤ 3 mm bone loss was characterized as mild periodontitis, 3–4 mm CAL and 16–30% or > 3 mm & ≤ 5 mm bone loss as Moderate Periodontitis and CAL ≥ 5 mm and bone loss > 30% (Severe Periodontitis). However, challenges in differentiating the aggressive periodontitis from chronic periodontitis and emergence of new scientific evidences such as peri implant health and diseases were the major rationale for the new classification workshop of 2017.

The American Academy of Periodontology (AAP) and the European Federation of Periodontology (EFP) cosponsored a workshop held in Chicago on November 9 to 11, 2017. It included periodontal and dental implant academicians from all over the world. Four consensus reports and 19 review papers related to periodontology and implant dentistry were evaluated by a committee from the AAP and EFP. The experts were assigned with updating the 1999 classification of periodontal diseases and conditions and developing a new classification for peri-implant diseases and conditions. The establishment of periodontal clinical case definitions and the provision of diagnostic criteria for periodontal and peri implant diseases were prioritized. This updated version was introduced and named as “**New classification scheme for periodontal and peri-Implant diseases and conditions: Introduction and key changes from the 1999 classification**”

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A. Periodontal health, gingival diseases and conditions**A I. Periodontal Health and Gingival Health**

1. Clinical gingival health on an intact periodontium
2. Clinical gingival health on a reduced periodontium
 - 2a. Stable periodontitis patient
 - 2b. Non-periodontitis patient

A 2. Gingivitis: Dental Biofilm Induced

1. Associated with dental biofilm alone
2. Mediated by Systemic or local risk factors
3. Drug-influenced gingival enlargement

A3. Gingival Diseases: Non-Dental Biofilm-Induced

1. Genetic/developmental disorders
2. Specific infections
3. Inflammatory and immune conditions
4. Reactive processes
5. Neoplasms
6. Endocrine, nutritional & metabolic diseases
7. Traumatic lesions
- 8 Gingival pigmentation

B. Periodontitis**B1. Necrotizing Periodontal Diseases**

- (1) Necrotizing Gingivitis
- (2) Necrotizing Periodontitis
- (3) Necrotizing Stomatitis

B2. Periodontitis

(1) *Stages: Based on Severity and Complexity of Management*

- Stage I: Initial Periodontitis
- Stage II: Moderate Periodontitis
- Stage III: Severe Periodontitis with potential for additional tooth loss
- Stage IV: Severe Periodontitis with potential for loss of the dentition

(2) *Extent and distribution: Localized, generalized, molar –incisor distribution*

(3) *Evidence or risk of rapid progression, Grades: anticipated treatment response*

- (a) Grade A: Slow rate of progression
- (b) Grade B: Moderate rate of progression
- (c) Grade C: Rapid rate of progression

B3. Periodontitis as Manifestation of Systemic Diseases

Based on the primary systemic diseases according to the International Statistical Classification of Diseases and Related Health Problems (ICD) codes

C. Periodontitis as a manifestation of systemic diseases and developmental and acquired conditions.**C1. Systemic diseases or conditions affecting the periodontal supporting tissues**

1. Other Periodontal Conditions
2. Periodontal Abscesses
3. Endodontic-Periodontal Lesions

C2. Mucogingival Deformities and Conditions around teeth

1. Gingival phenotype
2. Gingival/soft tissue recession
3. Lack of keratinised gingiva
4. Decreased vestibular depth
5. Aberrant frenum/muscle position
6. Gingival excess
7. Abnormal color
8. Condition of the exposed root surface

C3. Traumatic Occlusal Forces

1. Primary occlusal trauma
2. Secondary occlusal trauma
3. Orthodontic forces

C4. Prosthesis and tooth-related factors that modify or predispose to plaque-induced diseases/periodontitis

1. Localized tooth-related factors
2. Localized dental prosthesis-related factors

D. Peri-implant diseases and conditions**D1. Peri-implant health****D2. Peri-implant mucositis****D3. Periimplantitis****D4. Periimplant soft & hard tissue deficiencies**

This new classification (2017) of periodontal and peri-implant diseases will have a major impact on clinical practice with respect to periodontal and implant specialties. One of the major changes was the removal of the Aggressive and Chronic Periodontitis terms and replaced by a single category “Periodontitis“. Introduction of staging and grading, similar to being used in oncology for many years is bound to facilitate multidimensional periodontal diagnostic classification. This enables the clinician to give individualized diagnosis and tailor made treatment plans for every patient. However, severity and extent of disease is based on the measurable extent of destroyed and damaged tissue. Furthermore, complexity is determined by assessing factors that may influence disease control and managing long term function and aesthetics

- Staging is divided into 4 levels

Stage I: Early stages of attachment loss

Stage II: Established periodontitis.

Stage III: Significant damage to the attachment apparatus.

Stage IV: Significant damage to periodontal support leading to tooth loss and loss of masticatory function.

All stages of periodontitis will be supplemented with information about the grade of the disease.

Grading is a based on direct and indirect evidence of risk factors:

Grade A: rate of periodontal disease progression is low.

Grade B: is called the expected progression.

Grade C: high risk of periodontal disease progression.

Furthermore, periodontal health in the intact periodontium which is as important in the maintenance phase of patient management was introduced. With noticeable expansion in

the field of implant dentistry, this new classification introduced peri-implant health, peri-implant mucositis, peri-implantitis, and soft- and hard-tissue deficiencies around implants.

Other salient features of the new classification were as follow:

- Introduction of the term “gingival pigmentation”.
- Identifying smoking and diabetes as the major potential risk factors that can alter the staging of periodontal disease.
- Recognition of “periodontitis as a manifestation of systemic disease” such as Papillon Lefèvre Syndrome.
- Systemic conditions affecting the periodontium when not related to dental plaque will be considered as “Systemic Diseases or Conditions Affecting the Periodontal Supporting Tissues”.
- Management protocol of gingival recession based on the inter proximal attachment loss.
- The term periodontal phenotype replaced the periodontal biotype and supracrestal attachment is the new term replacing the biological width.
- Introduction of the term traumatic occlusal force.

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