

# Treatment of Chronic Periodontal Disorders: A General Practitioners Perspective

Ayesh Das<sup>1</sup>, Gatha Mohanty<sup>2</sup>

<sup>1</sup>Intern, <sup>2</sup>Senior Lecturer, Department of Periodontics and Oral Implantology, Institute of Dental Sciences, Siksha 'O' Anusandhan Deemed to be University, Bhubaneswar, Odisha, India

## Abstract

A greater number of patients will experience gums-associated disorders at one or the other point in their lifetime and also a section of the community is suspected to suffer from advanced gum associated disorders. Sound treatment is essential in dental practice (i.e. dental practitioner's perspective). A comprehensive layout of treatment which includes gum assessment, treatment, revisit of long-standing periodontitis cases in regular dental care, and treatment is discussed in this review.

**Keywords:** Primary essential periodontal examination (PEPE), Chronic Periodontitis, Pocket, Gingivitis, Periodontitis, Oral health conditions.

## Introduction

Unidentified unattended periodontal disorder is a rapidly increasing concern in dentistry and there are restricted guidelines that describe the accessibility to its treatment.<sup>1</sup> Dental care burden is rising by 85%. Elderly people over 65 years of age exhibit long-standing gum diseases which represents significant negligence in dental care. This article aims to provide information about various dental treatments of long-standing gum disorder in dental care and practice. The information focuses on the risk factors and oral hygiene (OH) method. Long standing gum disorders is associated with anaerobic bacteria. Management of chronic periodontal conditions can only be possible by patient cooperation and this/her desire to continue with good dental hygiene. Hence information is mainly based on OH maintenance, since it is well recognized and easy to follow.

## Primary Essential Periodontal Examination:

Various codes are used to determine the criteria for basic periodontal examination.<sup>2</sup>

**Code 0:** Bleeding is not seen after gentle probing, plaque retentive factor is absent, and pocket is not seen over 3.5mm.

**Code 1:** Bleeding is seen after gentle probing, plaque retentive factor is not found, no pocket seen over 3.5mm.

**Code 2:** There is no pocket exceeding 3.5mm. Retentive plaque factor is seen.

**Code 3:** Probing depth is from 3.5 –5.5 mm

**Code 4:** Probing is greater than 5.5mm on one or more sites. Furcation involvement is seen.

## Different Periodontal Disorders:

- 1. Chronic Gingivitis:** In Chronic Gingivitis gingival inflammation is present due to plaque-induced inflammation. Abnormal redness of skin resulting from dilation of blood vessels, swelling of gums is seen. During brushing, probing gingival bleeding is seen. Detachment of the gingiva from the teeth is seen occasionally.<sup>3,4</sup>

---

## Corresponding Author:

**Dr. Gatha Mohanty**

Senior Lecturer, Department of Periodontics and Oral Implantology, Institute of Dental Sciences, Siksha 'O' Anusandhan Deemed to be University, Bhubaneswar, Odisha, India

e-mail: gathamohanty@soa.ac.in.

2. **Acute Ulcerative Gingivitis:** Usually seen in patients who smoke or who present with poor oral hygiene. In the tip of the interdental papillae painful ulcerations are present, grey necrotizing sloughing tissue is seen on the area of the ulcers. Loss of interdental papillae may be seen. Loss of blood is spontaneous in gingiva. Halitosis is present with tender or palpable sub-mandibular lymph nodes. Fever and malaise may be also present.
3. **Gingival Hyperplasia:** Caused by medication of calcium channel blockers, cyclosporine, phenytoin. It is also caused by irritation from calculus and repeated friction and trauma.<sup>5,6</sup>
4. **Chronic Periodontitis:** Age, Smoking, diabetes, and family history are the most responsible factors for chronic periodontitis. Subgingival calculus is mostly seen, with prevalence in adults, the progression rate is from slow to moderate with related amount of dental plaques.<sup>7</sup>
5. **Aggressive Periodontitis:** About 1 in 1000 patients experience more quick auxiliary loss, alveolar bone destruction, and rapid attachment loss. Patients under 35 years of age are susceptible.<sup>3</sup>
6. **Acute Necrotizing Periodontitis:** Presence of attachment loss, associated mandibular lymph node may be tender and palpable, spontaneous gingival bleeding and there may be loss of interdental papillae, halitosis, fever and malaise.<sup>6</sup>
7. **Periodontal Abscess:** It is an acute infection in the gum pocket. The periapical and periodontal abscess should be differentiated if present together, since it's difficult to distinguish. Abscesses can be acute or chronic and asymptomatic if freely draining. The tooth will be vital if there is no endodontic component.
8. **Periodontitis associated with endodontic lesions:** Vitality of the tooth may not be present. Lesions may be independent or coalescing and may originate either from the gingiva or apex.

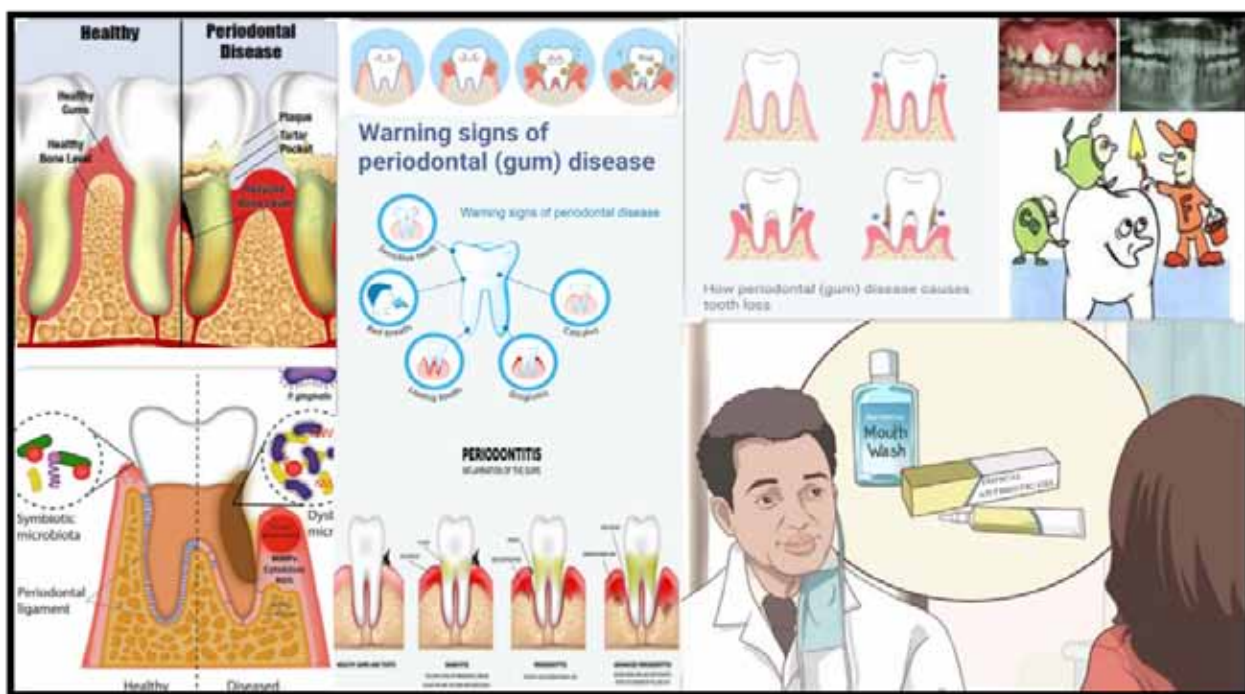
**Probable prospect for gum disorders:** Amount of destruction gives rise to dental changes and can be associated with a rise in bacterial plate in dens; moreover many internal and whole system structure risk

factors can aggravate susceptibility and severity of the issue. Patient personal history and clinical examination will help in highlighting these local and systematic risk factors for gum disorders. Systemic risk factors include medical conditions like diabetes, leukemia and many more. Patients who are under medication like phenytoin, cyclosporine and calcium channel blockers show inflammation. Stress, smoking and any family history of periodontal disorders can aggravate the condition.<sup>5</sup> By examination, we can also know about the overhanging restorations, calculus deposition, root caries, enameloma and adamantoma etc.

#### **Guidelines for long-standing gum disorders:**

The British Society of Periodontology offers various guidelines explaining the basic periodontal examination which can help us in providing basic treatment.<sup>10, 11</sup> Deep cleaning is the elimination of bacterial plate bio-factor and calculus deposition from the unseen portion of tooth and pockets. Making use of power-driven scaler or machine-driven scaler which are more useful for patients and clinicians over hoes, chisel, and files for root surface debridement due to their effectiveness.<sup>12,13</sup> Root surface debridement could be ended for periodontal pockets 4mm or more. Presentation of minimal dental cleanliness habits is an inseparable principle to be observed with any protocol of mechanical debridement. Oral hygiene education (OHE) must always be considered the treatment Hence an integral portion of the guidance utilizes OH to assist different and suitable treatment that can bring maximum welfare to dental health – which may be predominantly Oral hygiene education, Root surface debridement or either of them. The intensity or extent of the disorder can also be related to other portable parts of guidelines that include evaluating and labeling these. By categorizing OH as good, moderate, poor determining the level of dental hygiene of patients treatment planning may be done.<sup>14</sup>

**Radiographs:** X-ray helped to identify the horizontal bone level, any vertical bone defects, and furcation involvement. Criterion for bitewing radiographs: displays sufficient bone level in posterior sextants. Vertical bitewing can be useful where bone loss has so far taken place. Long cone periapical were advised for localized views. Further radiographs are only required for clinical explanation.



**Analyze and emphasize patient complain:** Patients' authority and management of dental hygiene is foremost important if they want to extract maximum profit from the treatment. Dental hygiene instructions and education are an integral part of treatment that contain tailored instructions on maintaining dental hygiene habits and interdental habits. Medium to develop dental hygiene behavior contains: Aim determination, monitoring dental habits, identifying the cause and significance of treatment, and proper revisit to confirm, visually motivate and utilize the dental cleanliness practices.<sup>15</sup> Instructing the patient by advising and talking with them on planning their treatment and supporting and motivating them to follow the proper instruction to maintain their dental hygiene is important.<sup>15</sup>

Individuals having gum bleeding can also be motivated to use home care method which are budget-friendly and can be used by all classes of society. After some time survey can be done to check the improvement.<sup>16</sup>

Bacterial plate and different indicators should be used together with a proper diagnosis which can be helpful for the patients to know their bacterial plate level and accordingly manage it.

**“O’Leary indicator”** helps to determine the existence or lack of bacterial plate at 4 times on various

dental surfaces. Suitable indicating agents like plaque search indicator or similarly any other medication or chemical is applied in every area of dental surface. Assessment can be done after rinsing the mouth once and any of the disclosed amounts of plaque visible can be recorded and the record can be worked out as a percentage.

Bacteria plate monitoring index should be utilized for uplifting compliance and provide a regulation when a patient is treated with (RSD) Root Surface Debridement to get the best outcome.<sup>17</sup> A bacteria plate results for better gum health response and it should be no more than 25%, minimal bacteria plate result, and must not be less than 10% respectively. It is considered that 15% is advised as a maximum. This is done to get a good result after root surface debridement.

### Conclusion

Dental practitioners should discuss and share their treatments with their group for better treatment. Educate or train nurses about dental hygiene education and plaque scoring. Note writing or detailed forms should be maintained to defend themselves in case of an allegation made against the practitioner. Following the Treatment guidelines recommended help in clinical and in non-medical treatment of long-standing gum disorders in daily dental practice.

**Conflict of Interest:** Nil

**Funding:** None

**Ethical Permission:** Approved

### References

1. Scottish Dental Clinical Effectiveness Programme. Prevention and treatment of periodontal diseases in primary care. 2014
2. Armitage GC. Development of a classification system for periodontal diseases and conditions. *Ann Periodontol* 1999; 4: 1–6.
3. National Institute for Health and Care Excellence. Gingivitis and periodontitis.
4. Schatzle M, Loe H, Lang N.P, Burgin W, Anerud A, Boysen H. The clinical course of chronic periodontitis: IV. Gingival inflammation as a risk factor in tooth mortality. *J Clin Periodontol* 2004; 31: 1122–1127.
5. Manresa C, Sanz E, Bravo M, Echeverría J J . Interventions for the maintenance of the dentition in patients treated for periodontal disease. *Cochrane Database Syst Rev* 2011; 10: CD009376.
6. Jepsen S, Deschner J, Braun A . Schwarz F, Eberhard J . Calculus removal and the prevention of its formation. *Periodontology* 2000 2011; 55: 167–88.
7. Lindhe J, Nyman S. Long term maintenance of patients treated for advanced periodontal disease. *J Clin Periodontol* 1984; 11: 504–514.
8. Westfelt E, Nyman S, Socransky S, Lindhe J . Significance of frequency of professional tooth cleaning for healing following periodontal surgery. *J Clin Periodontol* 1983; 10: 148–156.
9. Lindhe J, Westfelt E, Nyman S, Socransky SS, Haffajee AD. Long-term effect of surgical/non-surgical treatment of periodontal disease. *J Clin Periodontol* 1984; 11: 448–458.
10. British Society of Periodontology. Periodontology in general dental practice in the United Kingdom. 2001 (British society of periodontology).
11. Axelsson P, Lindhe J. The significance of maintenance care in the treatment of periodontal disease. *J Clin Periodontol* 1981; 8: 281–294.
12. Kocher T, Fanghanel J, Sawaf H, Litz R . Substance loss caused by scaling with different sonic scaler inserts - an in vitro study. *J Clin Periodontol* 2001; 28: 9–15.
13. Nield-Gehrig JS. Fundamentals of periodontal instrumentation and advanced root instrumentation. 5th ed. Philadelphia: Lippincott Williams & Wilkins, 2004.
14. ssO’Leary T, Drake RB, Naylor JE. Plaque control record. *J Periodontol* 1972; 43: 38.
15. Van der Weijden F, Slot D E . Oral hygiene in the prevention of periodontal diseases: the evidence. *Periodontology* 2000 2011; 5104–123.
16. Ioannou I, Dimitriadis N, Papadimitriou K, Sakellari D, Vouros I, Konstantinidis A. Hand instrumentation vs ultrasonic debridement in the treatment of chronic periodontitis: a randomized clinical and microbiological trial. *J Clin Periodontol* 2009; 36: 132–41.
17. Dental Protection. Periodontal monitoring. 2014.