MASTER YOUR PERIODONTAL PRACTICE: A GUIDE TO GENERAL DENTIST

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ABSTRACT

Periodontology is a fast evolving field where newer insights into existing concepts are changing the face of the traditional periodontal treatment. Constant research is taking place so as to develop a number of newer avenues in the treatment of the periodontal diseases. However, the protocol of management of periodontal diseases in the setup of general dental practice has undergone little change over the last decade. In spite of the development of quality dental institutes, a majority of the population visits private dental clinics for their dental needs, especially in the urban areas. This paper underlines the importance of specialist dental practice.

KEYWORDS: Periodontology, General Dentistry, Case Selection.

Introduction

Periodontology is a fast evolving field where newer insights into existing concepts are changing the face of the traditional periodontal treatment. Constant research is taking place so as to develop a number of newer avenues in the treatment of the periodontal diseases. However, the protocol of management of periodontal diseases in the setup of general dental practice has undergone little change over the last decade. In spite of the development of quality dental institutes, a majority of the population visits private dental clinics for their dental needs, especially in the urban areas.

However, it is a common complaint of Periodontist that the knowledge of periodontal diagnosis and treatment in the minds of a general dentist is sometimes limited to the level taught in the BDS curriculum at the time of their graduation. There is a need to evaluate the attitude and perception of the general dental practitioners toward periodontal treatment, as they form the cornerstone of dental practice. Hence, this review article is presented for cases selection and to identify the various aspects of periodontal treatment provided at a general dental clinic, along with referrals to Periodontist.

Case selection and treatment objectives

FLAP SURGERY

I) Conventional flap surgery

Case selection

1. Deep pockets more than 5mm which can’t be accessed by scaling and root planing.
2. Critical probing depth, which is more than 5mm, requires referral to the specialist for the specialized treatment.[1]
3. Persistent inflammation and pus discharge from the pocket after scaling and polishing.
4. Bone loss appreciated on the radiograph or OPG.
Periodontal therapy

- Flap surgery
  - Conventional Flap surgery
  - Regenerative periodontal surgery
- Crown Lengthening
  - Functional
- Splinting
  - Esthetic
- Plastic surgery
  - For root coverage
- Endo-Peri lesion
  - To increase width of attached gingival

Treatment options available in periodontal therapy

Critical probing depth evaluation

- BW=biological width, AL=attachment loss

Approx. Root length = 12 mm
Attachment = 10 mm
Pocket depth = 5 mm
+ Biological width = 2 mm
Total = 7 mm
That is more than 50%
Goals achieved by flap surgery
1. Improve access and visibility to clean off the plaque and calculus.
2. Elimination and reduction of the pocket depth.
3. Reduction in gingival inflammation and bleeding.
4. Healthy and maintainable gingival condition.
5. Exposure of the area to perform regenerative surgery.

II) Regenerative flap surgery

Case selection
1. Deep periodontal pocket.
2. Angular/vertical bone loss on radiograph.
3. Endo-perio lesion.
4. Deep localized pocket around tooth site.
5. Detection of angular defect on radiograph by placing GP point in the pocket

Goals achieved
1. Regeneration of alveolar bone.
2. Reduction in pocket depth.
3. Reduction in tooth mobility.

Concept of biological width and its importance in CLP

Sulcus depth 1mm + JE 1mm + CT attachment 1mm = Total distance 3mm

Observation indicates that impingement of the biologic width will result in bone resorption or, chronic gingival inflammation.

Crown lengthening can be done by two ways

1. Soft tissue removal (gingivectomy)
   If the sulcus depth is equal to or more than required crown exposure, in that case only soft tissue removal by doing gingivectomy will provide the desired crown length.

2. Osseous reduction
   If the sulcus depth is less than the required crown exposure, in that case only soft tissue removal by doing gingivectomy will not provide the desired
crown length. In such cases gingivectomy is followed by flap reflection and osseous reduction to get a desired crown length and to maintain biological width.

Crown lengthening is of two types
Esthetic crown lengthening
1. Aesthetic crown lengthening is a surgical procedure to help correct a gummy smile or for patients with short teeth.
2. Mostly performed in upper anterior region.
Functional crown lengthening
1. Functional crown lengthening is a surgical procedure that recontours the gum tissue and often the underlying bone around a tooth in case of carious or fractured tooth.
2. This is basically to provide sound tooth structure for restoration placement.

Splinting
Splint is an appliance designed to stabilize mobile teeth.
Case selection
1. Mobility of grade I or grade II origin, in some cases isolated tooth with grade III.
2. Commonly done in lower anterior followed by upper anterior region.
3. Firm anchorage from adjacent tooth is required.
4. Periodontal condition should be healthy.
5. Occlusion should be stable.

Types
According to the period of stabilization
Temporary: to be worn for less than 6 months.
Provisional: to be worn for months or several years
Permanent: used indefitintely.

According to the type of material
Bonded, composite resin button splint
Braided wire splint

According to the location on the tooth
Intracoronal: composite resin with wire, inlays, nylon wire.

Extracoronal: tooth bonded plastic, night guard, welded bands.

Mucogingival/periodontal plastic surgery
I] Root coverage procedure
Case selection
1. Deep narrow defect
2. Properly aligned teeth
3. Tissue should be in healthy condition
4. Sufficient thickness of gingiva
5. Width of attached gingiva should be adequate
6. Bone available in interdental area

II] Surgery to increase width of attached gingiva
Case selection:
1. Case with inadequate width of attached gingiva
2. Around 1-2mm of attached gingiva is supposed to be adequate if patient can maintain it.[2, 3]
3. Check for tension test

Methods for plastic surgery
1. Pedicle soft tissue graft procedure
   a. Laterally sliding flap procedure[4].
   b. Coronally repositioned flap procedure
2. Free soft tissue graft procedure
   a. Epithelialized graft
   b. Subepithelial connective tissue graft[5]

Endodontic periodontic lesion
Best classified as [6]
1. Primary endodontic disease
2. Primary periodontal disease
3. Combined diseases

Primary endodontic disease
• Causes: deep carious lesion, large restoration approximating the pulp, poor root canal treatment.
• Symptoms: mobility, localized bone loss, narrow pocket, tenderness to percussion, sinus tract & swelling.
• Diagnosis: radiographs, pulpal vitality test, Tracing of sinus tract & periodontal probing.
• Treatment: complete resolution is usually anticipated after conventional endodontic therapy.
• Prognosis: excellent
Primary periodontal disease

- **Cause:** caused primarily, by periodontal pathogens. In this process, chronic periodontitis progresses apically along the root surface.
- **Symptoms:** mobility, bone loss surrounding the tooth, wide pocket, Non tender to percussion, swelling. There is frequently accumulation of plaque and calculus and the pockets are wider.

- **Prognosis:** depends upon the stage of periodontal disease and the efficacy of periodontal treatment.

Combined diseases

- **Characteristics:** once the pulpal and periodontal lesions combines.
- **Diagnosis:** probing, radiographs, pulpal testing.
- **Treatment:** endodontic therapy, periodontal therapy, hemisection, bicuspidization & root amputation.

- **Prognosis:** depends on the each individual factor. Adequate root canal therapy resulted in resolution of the periapical lesion, prognosis of the affected tooth then depends totally on the outcome of periodontal therapy.
Conclusion

A primary goal of periodontal therapy is to reduce the burden of pathogenic bacteria and thereby reduce the potential for progressive inflammation and recurrence of disease. This is best achieved if everyone in the practice setting has a general understanding of the etiology of periodontal diseases, the benefits of treatment, and potential consequences of non-treatment. A general dentist should also be able to evaluate the case, which requires referral to the specialist for periodontal treatment need.

References


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