

## PERIODONTAL ASSEMENT AND MANAGEMENT IN FIXED PROSTHODONTICS

Active periodontal infection must be treated and controlled before the initiation of restorative, esthetic, and implant dentistry to achieve long-term therapeutic targets such as comfort, functionality, treatment predictability, longevity, and ease of restorative and maintenance care. Periodontal health is a **prerequisite** of successful comprehensive dentistry.

### Key parameters of success:

- Critical assessment of periodontal tissues
- **Establish periodontal health** before starting crown and bridge. The reason of its importance relies in:
  - Establishment of stable gingival margins before tooth preparation
  - Provide adequate tooth length for retention, access for tooth preparation, impression making and finishing of restorative margins.
  - Periodontal therapy should be completed before restorative care because resolution of inflammation may result in repositioning of teeth or soft tissue and mucosal changes.
  - Traumatic forces placed on teeth with ongoing periodontitis may increase tooth mobility, discomfort, and possibly the rate of attachment loss.
  - Successful esthetic and implant procedures may be difficult or impossible without specializing periodontal procedures developed for this purpose.

## SEQUENCE OF TREATMENT IN PREPARING PERIODONTIUM FOR RESTORATIVE DENTISTRY

### A. CONTROL OF ACTIVE DISEASE

#### A.1. EMERGENCY TREATMENT

Emergency treatment is undertaken to alleviate symptoms and stabilize acute infection. Includes endodontic and periodontal conditions.

#### A.2. EXTRACTION OF HOPELESS TEETH

Extraction of hopeless teeth is followed by temporary fixed or removable prosthetics. Retention of hopeless teeth without periodontal treatment may result in bone loss on adjacent teeth. Restorative margins are refined, and provisional restorations refitted after completion of active periodontal therapy.

#### A.3. ORAL HYGIENE MEASURES

Reduce plaque scores and gingival inflammation. In patients with deep periodontal pockets (>5mm), plaque control measures alone are insufficient in resolving subgingival infection and inflammation.

#### A.4. SCALING AND ROOT PLANNING

Oral hygiene measures along with scaling and root planning reduce gingival inflammation and rate of progression of periodontitis

#### A.5. RE-EVALUATION

After 4 weeks, gingival tissues are evaluated to determine oral hygiene adequacy, soft tissue response and pocket depth.

#### A.6. PERIODONTAL SURGERY

In deeper pockets (>5mm) plaque and calculus removal is often incomplete.  
→ Periodontal surgery to access root surfaces for instrumentation and reduce periodontal pocket depths must be considered before restorative treatment.

#### A.7. ADJUNCTIVE ORTHODONTIC THERAPY

As long as they are periodontally healthy, teeth with preexisting bone loss may be moved orthodontically without incurring additional attachment loss

### 2. PRE-PROSTHETIC SURGERY

#### B.1. MANAGEMENT OF MUCOGINGIVAL PROBLEMS

Widening the attached gingiva accomplishes the following three objectives:

- Enhances plaque removal
- Improve Esthetics
- Reduces inflammation around restored teeth

At least **2 months of healing** is recommended after soft tissue grafting procedures, before initiating restorative dentistry

#### B.2. PRESERVATION OF RIDGE MORPHOLOGY AFTER TOOTH EXTRACTION

Alveolar ridge resorption is common consequence of tooth loss. Preservation procedures should be done to prevent an unaesthetic deformity and for future placement of a dental implant or pontic.

#### B.3. ALVEOLAR RIDGE RECONSTRUCTION

Should be done for an **esthetic pontic** or for placement of **dental implants**. For small defects (esthetic pontic construction) they can be treated with soft tissue ridge augmentation. For larger defects (dental implants) hard tissue ridge augmentation is used.

---

#### B.4. CROWN LENGTHENING PROCEDURES

These procedures are performed for:

- Providing retention form
- Allowing proper tooth preparation
- Impression procedures
- Placement of restorative margins
- Adjusting gingival levels for esthetics.

It is important that crown lengthening surgery is done while **preserving biologic width**.

##### INDICATIONS

- a. Subgingival caries or fracture
- b. Inadequate clinical crown length for retention
- c. Unequal or unaesthetic gingival heights

##### CONTRAINDICATIONS

- a. Surgery would create an unaesthetic outcome
- b. Deep caries or fracture would require excessive bone removal on neighboring teeth
- c. Tooth is unrestorable

**SURGICAL CROWN LENGTHENING MAY INCLUDE REMOVAL OF SOFT TISSUE OR BOTH SOFT TISSUE AND ALVEOLAR BONE.**

- Reduction of soft tissue alone is indicated if:
  - There is **adequate attached gingiva**
  - There is **more than 3mm** of tissue coronal to bone crest. This may be accomplished by either gingivectomy or flap technique.
- **Inadequate attached gingiva** and **less than 3mm** of soft tissue coronal to bone crest require a flap procedure and **bone recontouring**.
- In case of caries or tooth fracture, to ensure margin placement on sound tooth structure and retention form, the surgery should provide **at least 4—5mm** from apical extent of caries or fracture to the bone crest.

WITH THE ADVENT OF PREDICABLE IMPLANT DENTISTRY, IT IS IMPORTANT TO WEIGHT CAREFULLY THE VALUE OF CROWN LENGTHENING FOR RESTORATIVE REASONS AS OPPOSED TO TOOTH REMOVAL