

Conservative Therapy

The second phase of initial therapy includes closed debridement of periodontal pockets. This treatment is also referred to as *conservative* therapy, contrast to periodontal surgery . It is non-surgical therapy.

The following procedures comprise this therapy:

- **-Subgingival Scaling**
Removal of adherent and non-adherent plaque as well as calcified plaque (calculus) from the gingival or bony pocket and from the root surface.
- **- Root Planing**
Removal of endotoxin-containing cementum once the root surfaces have been cleaned. This procedure cannot be sharply delineated from subgingival calculus removal and root planing.
- **-Gingival Curettage**
Removal of the pocket epithelium and infiltrated subepithelial connective tissue.

Closed curettage - Conservative therapy :-

, All of the above-defined procedures are carried out without reflecting the gingiva, i. e., without direct vision into the pocket or onto the root surface.

Open curettage - Surgical therapy:-

Following a marginal incision or an internal gingivectomy, Open Curettage and Modified Widman Procedure, the gingiva is reflected to such an extent that scaling and root planing can be performed with direct vision.

❖ **Indications**

Conservative procedures *without* surgery are indicated for mild to moderate periodontitis (pockets ≤ 6 mm). At re-evaluation several months later, the dentist can decide if local surgery is needed.

❖ **Contraindications**

None, although patients with severe systemic diseases require special attention (patients taking anticoagulants or those who require antibiotic coverage).

● **Advantages**

Closed treatment of the periodontal pocket is, in principle, a **simple** operation.

- It causes less trauma and hemorrhage than a surgical procedure.
- Gingival shrinkage during the healing phase is less than after invasive surgery. This may be important for esthetics.
- The conservative procedure is associated with long term maintenance of attachment level with regular recall.

Single rooted teeth respond regular well to the conservative treatment .

- **Disadvantages**

Subgingival scaling is one of the most technically difficult treatment modalities because it is performed without direct vision.

It is therefore not surprising that such scaling procedures do not achieve all root surfaces or that treated surfaces are not always completely free of residual plaque and calculus .

Closed pocket treatment is especially difficult in deep and narrow pockets, in furcation areas and where root irregularities exist.

- **Root Planing - With or without Gingiva Curettage**

Absolute cleanliness of the root surface is the most critical goal in pocket therapy.

All substances must be removed from the root surface including plaque, calculus and endotoxin. These toxins (lipopolysaccharide, from gram-negative bacteria) are found in the superficial layers of cementum, and can inhibit attachment of epithelium and regenerated connective tissue to the root surface.

For this reason, the root surface must be planed and smoothed until only healthy (hard) cementum or dentin remains.

Once the root surface is treated, the peeling out" of the pocket epithelium and infiltrate connective tissue can be accomplished. is being planed.

- The goals of these procedures are the elimination Of pocket infection and healing of the periodontal lesion .Some shrinkage of the tissue will occur, producing longer appearing teeth.

- **Instruments for Scaling and Root Planing**

For the removal of large accumulations of Subgingival calculus, *hoes* and *curettes* are the instruments of choice.

For plaque removal, root planing and soft tissue curettage, curettes are indicated exclusively; hoes are inappropriate for this purpose.

The dental marketplace offers innumerable instruments of various designs and varying quality. Every dental school and every dental practitioner have favorites..

In practice the instrument should be working tip an angle of 80 to the root surface.

All instruments must be sharpened before each use (except hoes with carbide tips).

- **Hoes**

- **Curettes Universal curette (yellow) - Anterior curette (orange) - Posterior curette (red)**

Their Use

Closed Subgingival scaling can only be a successful procedure if it is performed systematically, generally by **quadrants** or **sextants**, and using local anesthesia.

The operator must be aware of the probing depths and attachment loss on all root surfaces of each tooth to be treated.

The procedure can be performed "*tooth by tooth*" or "*instrument by instrument*". Here, the degree of precision demanded by the procedure is pitted against a rational approach.

It is more rational, time- effective and easier to treat all tooth surfaces in a dental segment with one instrument, and then switch to the next instrument.

However, when probing depths vary greatly from one tooth to another, and when teeth exhibit root fusions ,furcation involvement, or other anatomic peculiarities.

it often makes more sense to treat completely all surfaces of one tooth,

● **Gracey Curettes - Areas of Use**

Areas of use for the Gracey curettes - Minimum set

- **Gracey 5/6** (yellow) Incisors and canines
- **Gracey 7/8** (grey) Molars and premolars, *buccal* and *oral*
- **Gracey 11/12** (brown) Molars and premolars, *mesial*, furcations.
- **Gracey 13/14** (blue) Molars and premolars, *distal*, furcations

● **Instrument Sharpening**

The common instrument that serves both conservative as well as surgical periodontitis therapy is the curette. It is used for scaling, subgingival scaling, root planing and curettage.

Knowledge of its characteristics and maintenance of its function are therefore of great significance.

Instruments that have become dull must be resharpended; no degree of manual dexterity or force can compensate for the disadvantage of a dull instrument.

Dull instruments lack "bite," calculus is burnished rather than removed.

Systematic sharpening of curettes may be accomplished before during or after patient treatment

Especially the small slender curettes quickly become dull during scaling in a quadrant because of contact with metal restorations or enamel.

Such instruments must be *resharpened* during the treatment appointment using a sterile, mildly abrasive sharpening stone.

Instruments that have lost their proper shape or which were improperly sharpened must be recontoured using more abrasive sharpening stones.

● **Sharpening Stones**

Silicium carbide - Aluminum oxide

Sharpening stones are available in various shapes, colors, compositions and abrasiveness.

The most commonly used abrasive materials in such stones are the artificially produced *silicium carbide* as well as *aluminum oxide*).

These stones are indicated for reshaping of dull or misshapen instruments, but they create deep grooves in the edge and quickly reduce the instrument tip size