Two Approaches for Interproximal Osseous Tapering

by

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Present day recognition of osseous surgery as an important factor in the reduction of periodontal pockets [1] has led to a multitude of techniques. Many of these are necessarily drastic in nature.

There is, however, a common and often neglected situation which requires osseous reshaping of a more subtle kind in order to achieve the ideal of minimal crevicular depth and tapered gingival contour. This consists of thin tapered facial and lingual bone adjacent to bulky thick septa. It is most commonly seen in the anterior regions.

It usually appears as an area of shallow pockets, possibly reaching a maximum of 4 to 5 millimeters interproximally, where the gingival tissue is slightly enlarged and fibrous. Areas combining these features ordinarily respond well to gingivectomy-gingivoplasty procedures. However, they may exhibit an undesirable postoperative gingival regrowth if there are cramped embrasures, crowded teeth, over-contoured artificial crowns [2, 3] or, the thick septa cited above.

This bulk of bone may be recognized during a gingivoplasty when an instrument meets bone while creating an interproximal gingival taper. However, the operator should be aware of the pattern of gingival thickness if he is to plan his surgical procedure in advance. This information is gained by the horizontal insertion of a periodontal probe a millimeter or two apical to pocket depth (Fig. 1).

When the gingiva is very thin, osseous tapering is indicated. This is more frequently the case on the facial side and may be handled in two different ways.

The first method, described by Morris [4] and more recently by Robinson and John [5], starts with a gingivectomy-gingivoplasty. This is followed by exposure of the septa by individual vertical incisions through which a bur or stone is inserted for the ramping (Figs. 2, 3).

The second method removes excessive gingival tissue and thins the margin by means of the now popular internally bevelled incision (Fig. 4). This is a technique described many years ago for interproximal areas by Cieszynski [6], Box [7] and Beube [8], and for buccal and lingual surfaces by Barkann [9]. At that time it was used to remove granulation tissue and to create conditions favoring clinical reattachment. Its present use also makes bone accessible for remodelling.

If removal of this internal wedge of tissue does not sufficiently expose the septum further reflection at the interproximal area is accomplished without vertical incisions. After bone ramping the tissues are coapted by means of interrupted interdental sutures. Dressings are rarely necessary since neither raw gingivae nor bone are left exposed.

![Figure 1. Probe inserted horizontally a millimeter or two apical to pocket depth measures buccal gingival thickness and determines necessity for septal tapering.](image)

![Figure 2. (A) Probe puncture points marking pocket depths. (B) Gingival pocket walls removed. (C) Gingivae tapered. (D) Vertical slit for access to septum. (E) Separation of tissue adjacent to vertical slit. (F) Septal tapering with water cooled bur. (G) Gingivae adapted to bone, ready for surgical dressing.](image)

**Summary**

A clinical situation has been described requiring simple tapering or ramping of the septum in conjunction with soft tissue surgery. Two methods have been described and evaluated.
Figure 3. (A) Preoperative. (B) Graft. (C) Gingivoplasty. (D) Vertical interproximal incisions. (E) Suturing. (F) Ramping with water-cooled bar. Immediately after septal ramping. (G) Six months postoperatively.
FIGURE 4. (A) Preoperative. Thick fibrous gingiva with shallow pockets. (B) Internal bevelled incision, removing excessive gingiva and tapering the remainder. (C) Appearance of incision. (D) Internal gingival wedge removed. (E) Bur inserted for vertical tapering. (F) Sutured. (G) One week postoperatively.
REFERENCES