

FIRST HILL DENTAL IMPLANT CENTER

Periodontics & Implant Dentistry

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Periodontal Pointers for the Contemporary Dental Practice

Periodontal Plastic Surgery

Periodontal plastic surgery is an exciting new field of therapy in the specialty of periodontics that has revolutionized the treatment of anatomical and functional defects of the periodontium. About one third of the procedures performed by us in our practice involve periodontal plastic surgery.

Periodontal plastic surgery can be divided into two broad categories: regenerative and resective. The regenerative procedures involve mucogingival surgery, root coverage surgery, guided tissue regeneration and extraction socket grafting. The resective procedures include esthetic crown lengthening and functional crown lengthening.

Periodontal plastic surgery has evolved significantly over the last five years. Our understanding of wound healing, refinements to surgical techniques and better technology with suture materials have allowed periodontists to correct un-esthetic gingival lesions that were previously left untreated or filled with restorative materials.

This issue of the periodontal pointer focuses on mucogingival surgery and root coverage surgery performed using the latest microsurgical techniques. We will explore the options that are available using different autogenous graft materials. There has never been a time in dentistry when more patient options are available to return the periodontium to the natural condition with early intervention and timely diagnosis and treatment.

There are two types of autogenous tissues that are frequently used in periodontics for soft tissue grafting: free soft tissue and connective tissue. Free soft tissue is distinguished from connective tissue in that it contains both epithelial and connective tissue, whereas connective tissue grafts do not contain any epithelial cells.

Free Soft Tissue Grafting

The biology behind soft tissue grafting procedures was first described by Sullivan and Atkins (Bellevue, Washington) in the mid 60's. These types of grafts were indicated for gingival augmentation following gingival recession or as a pre-prosthetic procedure. They were extremely predictable but were also famous for being very uncomfortable during the healing phase, especially the donor palatal tissue. Later, these grafts were used for limited root coverage procedures.



Figure 1 - Shows the palatal donor site after the harvest of a free soft tissue. When a free soft tissue graft is harvested, a naked palatal wound must re-epithelialize which can be a slow process (.5mm/day from each side of the wound edge).



Figure 2 - Shows the mandibular anterior region with a very shallow vestibule, no attached tissue and gingival recession on #24 and 25



Figure 3 - Shows a recipient site created by removing the loose mucosal tissue and suturing the free soft tissue graft to the underlying periosteum



Figure 4 - Shows three weeks of healing following the free soft tissue graft surgery

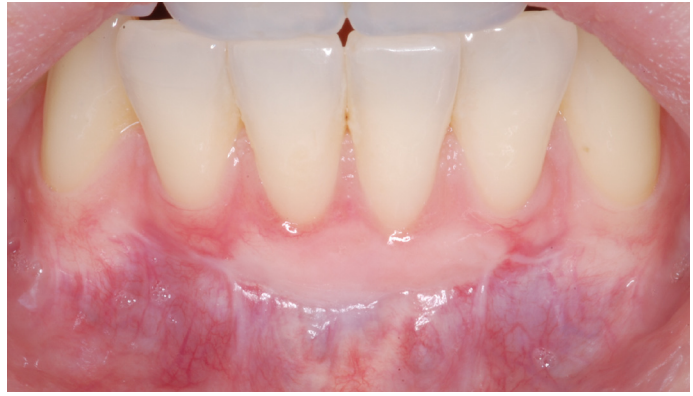
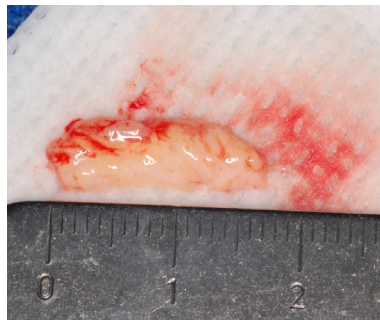
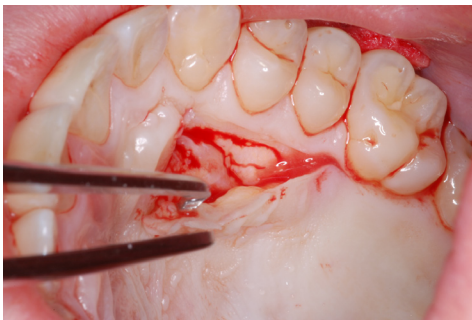


Figure 5 - Shows excellent healing two months after the free soft tissue graft procedure with 100% root coverage on #24 and 25 and a nice zone of attached keratinized tissue around these teeth

Connective Tissue Grafting

The second type of autogenous tissue, connective tissue, is a versatile deep palatal tissue type used in many different applications in periodontics. Connective tissue grafting has increased in popularity due to the highly esthetic results that can be achieved when used in combination with different flap techniques.



Figures 6, 7, and 8 - Show the connective tissue graft being harvested from the palatal donor site. As you can see in this example, connective tissue is taken from a deep layer of the palate and a naked wound is not present on the palate following graft harvest. Palatal healing tends to be more comfortable following connective tissue harvest for this reason.



Figure 9 - Shows severe gingival recession on the facial of #22 and 27 with no attached tissue



Figure 10 - The same patient 3 months after connective tissue grafting on #22 and 27 (Note: excellent root coverage and a very natural looking esthetic result)



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