

Case Report

Treatment of Gingival Recession Using OrACELL Decellularized Dermis: Case F.J.

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Gingival recession, a common dental condition seen by dental surgeons, is often treated with a root coverage procedure.^{1,2} In the past, subepithelial connective tissue grafts (SCTG) have been used to treat gingival recession; however, these grafts require a secondary surgical site that often leads to increased patient morbidity.^{1,2,3} For this reason, alternative grafts that avoid these issues have been developed. For example, acellular dermal matrix allografts have become a popular choice among surgeons to treat gingival recession.^{2,4}

One such allograft, OrACELL, is a decellularized human dermis that is typically applied in maxillofacial applications. This matrix of collagen, elastin, and growth factors is designed to be a scaffold for tissue regeneration and proper healing where applied.

The following case presentation involves root coverage procedures for gingival recession using OrACELL®.

PATIENT

- 36 year old Female; Good Health (Acceptable oral hygiene)

DIAGNOSIS

- Gum recession and inflammation in lower left of #20, #21, and #22 (**Fig 1**)
- 1 mm recession with thin keratinized tissue at #20 and #22
- 4 mm recession with little keratinized tissue remaining at #21

TREATMENT

- Changes to tooth brushing technique to eliminate mechanical trauma
- Local infiltration with lidocaine and epinephrine; Roots of #s 20, 21, and 22 planed aggressively and then burnished with tetracycline
- Sulcular incision made at #s 20, 21, and 22 continuing beyond mucogingival junction into the buccal vestibule and undermining the papillae between #s 21 and 22
- Papillae between #20/21 and #22/23 undermined with sharp dissection and separated from underlying tissue on the facial aspect, level with adjacent CEJs with a #15-c surgical blade
- 10 mm x 5 mm piece of OrACELL decellularized dermis used as connective tissue graft to #22; 15 mm x 5 mm piece of OrACELL used for #20 and #21
- OrACELL soaked and fed under dissected tissues buccal to #s 20 and 21 then stabilized with sling sutures; Second piece of OrACELL placed over facial surface of the root of #22 and under buccal native tissue then stabilized with sling sutures (**Fig 2**)
- Buccal, native gingival tissues coronally positioned over OrACELL and stabilized with secondary row of sling sutures
- A periodontal dressing was used to protect graft

OUTCOME

- Post-operative healing at 3 month follow-up, sutures removed (**Fig 3**)



Figure 1: Pre-operative Root Exposure



Figure 2: Surgical Application of OrACELL



Figure 3: 3 Month Post-operative Healing

1. Koudale SB, Charde PA, Bhongade ML. A comparative clinical evaluation of acellular dermal matrix allograft and sub-epithelial connective tissue graft for the treatment of multiple gingival recessions. *J Indian Soc Periodontol.* 2012;16(3):411-416.
2. Ayub LG, Ramos UD, Reino DM, et al. A randomized comparative clinical study of two surgical procedures to improve root coverage with the acellular dermal matrix graft. *J Clin Periodontol.* 2012;39:871-878.
3. Wennstrom JL, Zucchelli G. Increased gingival dimensions. A significant factor for successful outcome of root coverage procedure? A 2 year prospective clinical study. *J Clin Periodontol.* 1996;23:770-7.
4. Rahmani ME, Mohammed A, Rigi Lades ME, et al. Comparative clinical evaluation of Acellular Dermal Matrix Allograft and connective tissue graft for the treatment of gingival recession. *J Contemp Dent Prac.* 2006;2:63-70.