

# Case Study

## **OsteoGraf®/LD and Extraction Sites**

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A 42-year-old male complained of tooth #15 being mobile and painful. There was obvious swelling in the surrounding area and it was determined the tooth could not be saved. The patient agreed to extraction of the tooth, but was unsure of what final restoration option he would elect in the future.

The tooth was extracted easily due to the amount of bone loss. The socket was thoroughly curetted and debrided of all tissue down to the native bone (Figure 1). Since the patient would not commit to endosseous implants at this time, a synthetic resorbable hydroxylapatite was chosen to graft the socket. OsteoGraf/LD-300, (CeraMed Dental, Lakewood, CO) was used to preserve the socket walls and prevent resorption of the alveolar ridge. Ridge preservation is essential not only for supporting prosthetic reconstruction but also for achieving and maintaining esthetics for the patient.

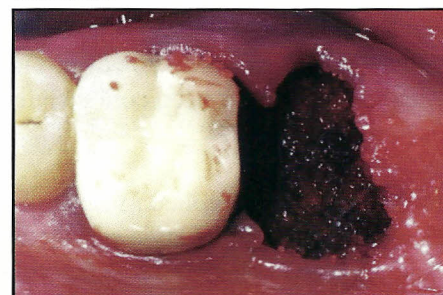
The OsteoGraf/LD-300 was wetted in a sterile dappen dish with a diluted measure of tetracycline and sterile water. Once hydrated, the graft material was pulled into a sterile delivery syringe and brought to the extraction socket. With the aid of a sinus-packing instrument, the graft material was adapted into the socket firmly, but loose enough to maintain the blood supply to the graft (Figure 2).

To contain the graft material in the socket walls, a dry piece of Gelfoam® (Pharmacia & Upjohn, Kalamazoo, MI) was cut in half and pressed into position over the socket opening. The dry resorbable sponge was hydrated with blood and used to hold the OsteoGraf/LD-300 inside the socket walls (Figure 3). Closure over the socket was done with 4-0 Vicryl® in a 6-point closure to confine the graft and sponge in place (Figure 4). The patient was dismissed with standard post-extraction home care and regime, and scheduled for postoperative evaluation in 10 days.

By utilizing the OsteoGraf/LD-300 as a filler in fresh extraction sockets, the risk of ridge resorption is minimized. The sites will fill with bone instead of soft tissue. Grafting every extraction site with a synthetic resorbable hydroxylapatite is an economical way to preserve the ridge regardless of the prosthetic treatment plan.



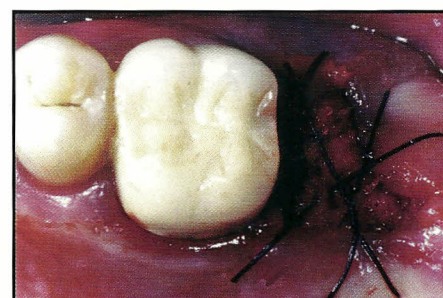
*Figure 1. The socket is thoroughly debrided.*



*Figure 2. OsteoGraf®/LD-300 packed into extraction site.*



*Figure 3. Dry Gelfoam® positioned over grafted socket.*



*Figure 4. Sutures will contain graft material and Gelfoam®.*

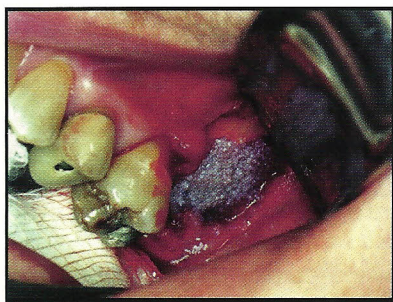
# OsteoGraf®/LD - surgical procedure

## Grafting Extraction Sites

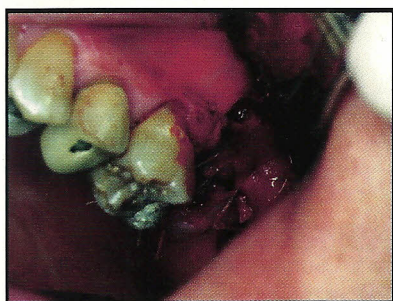
Following an extraction, the alveolar bone heals by remodeling and filling the socket with new bone. Unfortunately, the fill is almost always incomplete and as much as 40% - 60% bone loss in the extracted socket area can be expected, especially in the mandible. OsteoGraf/LD is a pure, porous, synthetic form of hydroxylapatite, the major mineral component of tooth enamel and bone. OsteoGraf/LD, when used as a bone replacement material in extraction sites, has proven to be effective in reducing bone loss, plus preventing adjacent teeth from shifting and becoming periodontally involved. The highly porous, resorbable material provides a readily available source of calcium for bone regeneration and can successfully be used for ridge preservation.

Proper preparation of the extraction site is necessary for a successful graft. After the tooth has been extracted from the alveolus, thorough curettage and removal of all debris and residual tissue from the socket walls is essential. If there is no bleeding from the socket walls, more rigorous curettage or decortication of the socket walls will promote bleeding. The bleeding, however, must be controlled to minimize loss of particles. Once the socket has been copiously irrigated and aspirated, it is ready to receive the OsteoGraf/LD.

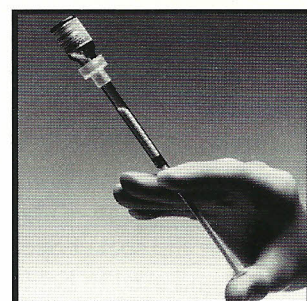
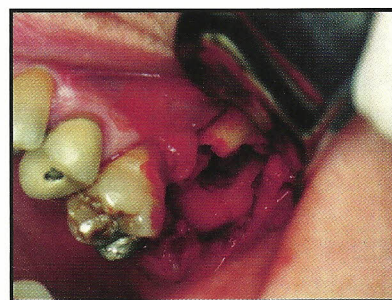
OsteoGraf/LD is supplied in sterile 1- and 3-gram vials. The patented vial interconnect accepts three different style syringes, straight, curved or beveled tip. The unfilled syringe barrel is inserted into the vial connector and the desired amount of OsteoGraf/LD is transferred from the vial into the syringe and the nylon filter cap is replaced on the syringe. Sterile saline solution is drawn up through the filter cap to thoroughly wet the material. Any excess saline solution is expelled by depressing the syringe plunger.



With the socket site thoroughly cleaned, the OsteoGraf/LD is expressed into the socket. The material should completely fill the socket when gently packed. Closure over the graft should be tension free to avoid compromising blood flow and the tissue securely repositioned with non-resorbable suture achieving primary wound closure. If it is not possible to achieve complete tissue closure, a dental pack, such as Gelfoam® should be sutured into position. This will insure containment of the graft material during the initial healing phase.



As with all procedures, proper preparation, choice of materials and patient compliance are of equal importance in achieving the best results possible for both you and your patient. OsteoGraf/LD is a predictable bone replacement graft material indicated for filling extraction sites.



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