

DENTAL

Osteomesh®

In Guided Bone Regeneration

Surgical Technique

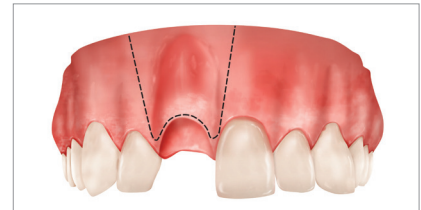


Technique Tip

This technique is intended for repair of alveolar bone defects using guided bone regeneration technique using Osteomesh® which serves two purposes. First as a scaffold with interconnected pores that facilitate osteoblast infiltration and bone formation. Also due to its inherent rigidity, it retains the bone graft material and maintains the volume of the grafted area without collapsing.

1 Surgical Exposure of Defect

Raise full thickness mucoperiosteal flap to expose bone wall defect. Remove all granulation tissues.

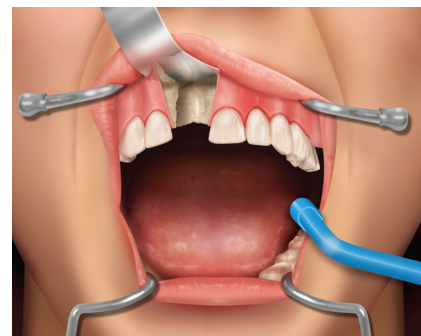


2 Defect Site Preparation

Using curette, the defect site is debrided of any unwanted granulation tissues.

- **RELIEVING OF SOFT TISSUE**

As the periosteum is not expandable, the underside of the periosteum is scored, and blunt dissection is made at the flap edges.



3 Preparation of Osteomesh®

Remove Osteomesh® from sterile packaging and place it into a dry sterile bowl.

- **SIZING OF DEFECT** - Select the suitable size of Osteomesh® and remove it from single wrap sterile packaging and place in dry sterile bowl.
- **TRIMMING OSTEOMESH®** - Using a pair of sterile surgical scissors, Osteomesh® is trimmed to the desired shape. **Totally removing the borders of the mesh is recommended.**
- **MOULDING OSTEOMESH®** - Fill a sterile bowl with warm saline. Refer to the table for the appropriate temperature.



Mesh Thickness (mm)	Temperature (°C)
< 0.75	42 – 45

**Note: The saline temperature should not exceed the maximum temperature stated in the table.*



- ▶ Immerse Osteomesh® for approximately **10 seconds** to make it more malleable.
- ▶ Hold Osteomesh® in the desired shape for approximately **5 seconds**.
- ▶ Remove Osteomesh® from the warm saline while holding it in its new shape for another **10 seconds**.
- ▶ Repeat step until desired shape is formed.

Warning: This description is not sufficient for immediate application of the instrument. Instruction by a surgeon experienced in handling the instrumentation is highly recommended.

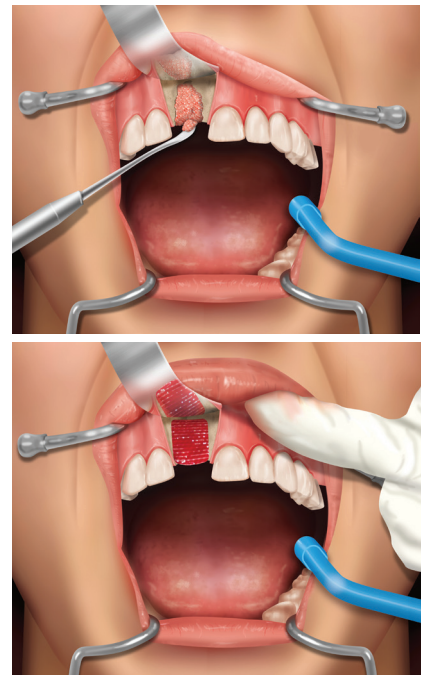
Technique Tip *cont'd*

4 Osteomesh® Insertion

The Osteomesh® may be tucked below the mucosa to assist in securing the mesh. The lateral edges of the Osteomesh® must be tucked underneath the mucosa.

- **PACKING BONE GRAFT**
Bone graft may be used to fill the defect as required. 1 - 2mm granules size is recommended.
- **FIXATION OF OSTEOMESH®**
Additional mattress suture or screw fixation can be used to increase stability.

Additional barrier membrane over the grafted site may be required.



5 Closure of Surgical Site

The periosteal layer of the buccal flap is scored to allow tension-free wound closure.

Simple interrupted sutures are used to close the wound, while additional horizontal mattress sutures can be placed to further relieve tension at the wound edge to prevent dehiscence.



6 Post-operative Care

Post-operative care should be conducted according to the surgeon's protocol and current standard of care. Wound control is recommended for the first three weeks until complete soft tissue healing is achieved.

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