

# Vestibuloplasty Using OrACELL® Acellular Dermal Matrix (ADM)

Dr. Luo, Chin-Wan, Taipei Medical University, Shuang-Ho Hospital, Taiwan

CASE STUDY

A vestibuloplasty procedure is used to correct issues involving instability and retention of denture wear caused by insufficient depth of the vestibule.<sup>1,2,3</sup> Several techniques exist to deepen the vestibule including sub-mucosal vestibuloplasty,<sup>4</sup> secondary epithelialization vestibuloplasty,<sup>5</sup> and soft tissue grafting vestibuloplasty.<sup>3,6,7</sup> In the past, autografts taken from the palate were used in vestibuloplasty procedures; however, increased morbidity, bleeding, and other surgical risks typically occur with autograft use.<sup>2,3,8</sup> For these reasons, acellular dermal matrix allografts are used to avoid these issues.

An alternative method of treatment used in Vestibuloplasty procedures involves the use of an Acellular Dermal Matrix (ADM), which has demonstrated application in a variety of medical procedures, including wound healing, soft tissue reconstruction, and sports medicine applications.<sup>9-12</sup> These dermal matrices have been demonstrated to support cellular and vascular in-growth *in vitro* and *in vivo*.<sup>13-15</sup> One particular human allograft ADM, Oracell, is uniquely prepared resulting in at least 97% DNA removal and provided sterile at room temperature, ready to use.

**The following case presentation involves a Vestibuloplasty performed using this novel human ADM, Oracell.**

## Patient

- 37-year-old, female

## Diagnosis

- Patient had insufficient vestibule depth (5mm) (Figure 1)
- Vestibuloplasty necessary to treat with implants
- Preoperative alveolar ridge height of 18mm
- Patient was not edentulous

## Treatment

- One (1) 1.5cm x 2 cm piece of Oracell ADM was applied (Figure 2) using an individualized premade surgical stent with fixed wiring to immobilize the graft

- Post-operatively the width of fixed tissue was 18mm
- Stent remained for 1 week (Figures 3,4)
- Oracell ADM had integrated at wound site by Week 4 post-op (Figure 5)
- By Week 12, the width of fixed tissue had reduced to 12mm
- By Week 18, the width of the fixed tissue had reduced to 8mm

## Outcome

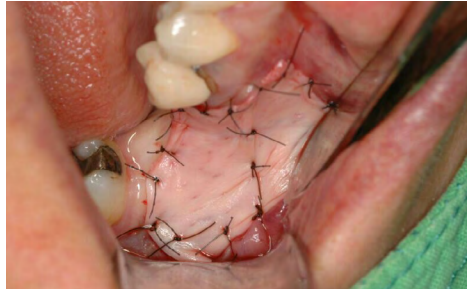
- Wound had completely healed by 18 weeks post-op
- Use of Oracell ADM was successful

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**Figure 1.**  
Pre-operative picture showing lack of vestibule depth



**Figure 2.**  
Surgical placement of Oracell for vestibule extension



**Figure 3.**  
1 week post-operative with the individualized surgical stent slightly visible before removal



**Figure 4.**  
1 week post-operative after stent removal



**Figure 5.**  
4 weeks post-operative healing and integration of Oracell at wound site

Results from case studies are not predictive of results in other cases. Results in other cases may vary.

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