Facial Surgery

Case Report

Improved Surgical Access for
Facial Dimple Creation

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Abstract
As an alternative to blind coring of the soft tissue from the buccal mucosa to the dermis or the placement of transcutaneous sutures, both of which can be associated with untoward side effects, the authors describe a safe and effective method for creating dimples through an open technique that replicates the anatomical basis of a natural dimple.

Keywords
facial surgery, dimple, suture

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Facial dimples are often considered an attractive facial feature. Natural dimples appear only upon smiling and perhaps because of that, dimples are generally associated with cheerfulness. As the awareness about and willingness to undergo cosmetic surgery has increased, so recently has the demand for surgical creation of dimples on the face.

Anatomical studies on cadaveric faces have shown that dermocutaneous insertion of the fibers on the inferior bundle of the bifid zygomaticus major muscle may be responsible for the dynamic nature of dimples. Anatomically, a dimple is only an abnormal insertion of the facial mimetic muscle, rather than a soft tissue defect.

Multiple techniques have been described for dimple insertion, including blind coring of tissue and the placement of a transcutaneous sling between the dermis and the buccinator muscle. All dimple techniques depend on fashioning an adherence of the buccinator to the dermis with sutures or through myodermal scar induction.

Blind coring of the soft tissue from the buccal mucosa to the dermis carries the risk of injury to the buccal branch of facial nerves. Further, transcutaneous sutures can cause puncture scars and have been reported to cause foreign body granulomas. To that end, we describe a safe and effective method for creating dimples through an open technique that replicates the anatomical basis of a natural dimple and relay the results in a short case series of patients.

SURGICAL TECHNIQUE
Through consultation with the patient, the preferred site for the dimple was marked preoperatively. If the patient already had a faint dimple upon smiling, that was the ideal site for a more prominent dimple to be placed during surgery, and it was so marked. If the patient had a dimple on one side, the other cheek was marked at the corresponding site.

If no suggestion of a dimple existed, the proposed site was marked at the intersection of a horizontal line from the corner of the mouth with a vertical line dropped from the lateral canthus.

The patient’s face and mouth were prepped, and either local anesthesia or general anesthesia was administered, depending on patient preference. Hypodermic needles were then passed through the marked line into the buccal mucosa. A vertical incision was made on the mucosa at this site, taking care to avoid injury to the Stenson’s duct.

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An L- or T-limb was added to the vertical cut, and the mucosal flaps were elevated (Figure 1).

After elevation, the buccinator muscle was identified. A few fascicles of the muscle were bluntly dissected over an artery forceps, and a 3-0 Prolene (Ethicon, Inc., Somerville, New Jersey) stitch was passed through the proximal portion of the muscle fibers (Figure 2). The dermis was exposed, the muscle fibers were cut immediately distal to the stitch, and the muscle was sutured to the dermis. An additional suture was placed between the muscle and dermis to secure the myodermal attachment. An absorbable suture was then passed between the submucosa and the dermis.

Figure 1. A vertical incision is made on the mucosa at this site, taking care to avoid injury to the Stenson’s duct. An L- or T-limb is then added to the vertical cut, and the mucosal flaps are elevated.

Figure 2. A few fascicles of the buccinator muscle are bluntly dissected over an artery forceps, and a 3-0 Prolene (Ethicon, Inc., Somerville, New Jersey) stitch is passed through the proximal portion of the muscle fibers.

Figure 3. (A) This 32-year-old man presented for dimple placement. (B) One year after surgical placement of a dimple with the authors’ open technique.
after which the mucosal incision was closed with 4-0 chromic catgut sutures.

The anomalous anatomy responsible for dimples was surgically mimicked with this technique, without requiring any soft tissue removal. By allowing adequate exposure as the mucosal flaps were raised, sutures between the muscle and the dermis were placed with improved control. This enhanced exposure was particularly useful in patients with “chubby” cheeks, where the depth of the field and fat tissue can make precise suturing difficult.

Patients were instructed to maintain their oral hygiene well in the immediate postoperative period and advised not to smile fully during the first two weeks. The dimple became prominent in the initial few weeks after surgery and resembled a natural dimple (appearing only on smiling) within four to six weeks. The postoperative results for two patients can be seen in Figures 3 and 4.

In total, five patients have undergone this dimple procedure using this technique. A total of eight dimples were placed in those patients, and four patients were followed up for one year. All patients had an overcorrected appearance of their dimples during the initial postoperative weeks, for a duration of approximately three to four weeks. The dimples persisted in all patients at one year postoperatively. One patient reported feeling that the dimple on one side could have been deeper than it was postoperatively, but that was the only complaint. Revision surgery was not required in any case.

Complications reported with other techniques include foreign body reaction, sudden disappearance of the dimple, and hemorrhage, but none of these were noted with this technique, probably because of improved visibility and control during the surgical procedure.

**CONCLUSIONS**

The simple, open procedure described by the authors for placing a facial dimple provides a predictable outcome with minimal morbidity, which makes it an excellent alternative to existing techniques.

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REFERENCES


