

Facial Dimploplasty: Open Surgical Access Case series

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ABSTRACT

Background: Facial dimples are common findings in the human face and always have been considered a sign of facial beauty.

With the increased awareness of plastic surgery, there are also an increased in the willingness to have surgically created dimples. Multiple surgical techniques have been described for creating facial dimples.

The open surgical technique for facial diploplasty gives proper visual access for mimicking the natural dimples rather than the blind coring of the tissues or the transcutaneous sutures as both are associated with more risk of unwanted complications or side effects.

Key words: Dimple, dimple surgery, sutures

INTRODUCTION

Dimples are frequent dents in the human face, as they usually show up on the more mobile areas about the cheeks and lower lips, also it sometimes appears as a constant dent in the middle of the chin prominence⁽¹⁾. Cheek dimples is always considered as an attractive facial feature in both males and females with no specific predominance^(1, 2), they may occur unilateral or bilateral and usually are genetically inherited as a dominant trait⁽³⁾.

The size and shape of dimples varies from one person to another and sometimes its shape can differ in the same individual with the change of his body weight or with the aging process, these variations can be due to the elasticity of the soft tissues, the facial muscle tone and their cutaneous insertions⁽¹⁾.

Dimples are dynamic facial features, this means that they show up with facial animations and disappear upon rest. This is attributed anatomically to an abnormal insertion of the facial muscles to the skin⁽²⁾. Anatomical studies of the cadaveric faces showed that there is a variation of the zygomaticus major muscle that has bifid insertion, the inferior slip was found to be inserted into the dermis of the buccal chin and was attributed to the occurrence of the facial dimples as the skin is tethered to the contracting muscle⁽⁴⁾. That's why all dimple creation surgeries relay on securing myodermal attachment between the buccinator muscle and the dermis⁽²⁾.

Having a dimple is a frequent request by many people all over the world specially the females with both surgical and non-surgical

methods.

Figure 1 shows one of the old non-invasive methods of creating facial dimples.

Multiple surgical techniques have been proposed for dimple creation such as blind coring of the tissue from the buccal mucosa to the dermis⁽⁶⁾, placement of non-absorbable suture sling between the buccinators and the dermis⁽⁷⁾, removal of punch of tissues⁽¹⁾ and the open surgical access that mimics the anatomical basis of the natural dimple⁽²⁾.

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⁽¹⁾. Further, transcutaneous sutures can cause puncture scars and have been reported to cause foreign body granulomas⁽⁷⁾.

In this topic, we discuss the open technique that replicates the anatomical basis of the natural dimple.

PATIENTS AND METHODS

Actually, our subjects are not considered patients as dimple creation is an elective surgery with no underlying illness that mandates surgical intervention, so there is no special characteristics for patient selection.

Our subjects were all females, with the age ranging between 25 to 30 years, some were married while others were not, and none of them complained of any chronic illnesses or associated co-morbidities.

The operation is done on a day case surgery basis under local anaesthesia, the patient is

discharged in the same day with medication and follow up instructions.

Surgical technique:

Through open discussion with our patients the preferred site for the dimples is marked preoperatively in front of the mirror. If the patient has faint dimples so it will be the best site for creating a more prominent one and if the patient has one dimple on one side so the other one is made at the same site of the other cheek.

If the patient was indecisive about the site the proposed site was suggested by us at the intersection of one vertical line from the lateral canthus of the eye with one horizontal line from the angle of the mouth (Figure 2).

After marking the sites, the face and mouth of the patient were prepared and local anesthetic agent was administrated as 1cc of lidocaine 1% with adrenaline 1:200000 was injected locally through the skin up to mucosa using hypodermic needles.

After few minutes a 3cc needle was passed through the skin mark to the mucosa then T shaped incision was made in the mucosa taking care not to injure the Stenson's duct, this is followed by elevation of the mucosal flaps (Figure 3).

After mucosal flap elevation, the buccinators muscle is identified and few fascicles of the muscle are isolated over an artery forceps by blunt dissection (Figure 4), then a prolene 3/0 suture was passed through the proximal part of the isolated fibers, followed by retraction of the fibers and dissection of the buccal fat to expose the dermis.

After exposure of the dermis the muscle fibers were cut distal to the stitch then the stitch was passed through the dermis securing the myodermal attachment, then another stitch was made between the muscle and the dermis to further secure this attachment, this followed by closure of the mucosal flaps using absorbable sutures.

The anomalous anatomy responsible for dimples was surgically replicated using this technique, with no 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.

RESULTS

After discharge, Patients were instructed to maintain good oral hygiene in the immediate postoperative period and advised not to smile fully during the first two weeks. All given flagyl and broad-spectrum antibiotic with analgesics and anti-inflammatory medications.

The dimples were constantly prominent immediately after surgery and for a variable period ranging from two weeks up to one month after which they became dynamic appearing only with smile and facial animation resembling the natural dimples.

DISCUSSION

Five patients were operated using this technique with nine dimples created up to the time of publishing this report, all of them were totally satisfied by the result immediately post-operative and in the follow up visits. Only one patient reported feeling that the dimple on one side could lower than the other side, but that was the only complaint. Revision surgery was not required in this case as after they became dynamic the patient became fully satisfied with them (Figures 5 & 6).

Complications reported with other techniques include foreign body reaction, sudden disappearance of the dimple, and hemorrhage⁽⁶⁾, but none of these were noted with this technique, probably because of improved visibility and control during the surgical procedure.

Patient Perspectives

I saw many people with dimples that make their smiles more beautiful, I noticed that I have a faint dimple on one side so; I encouraged myself and go to Dr. Muhammad clinic. There was only one day with pain post operatively. Now I'm satisfied with my naturally looking dimples and I'm happy with compliments of my husband, my family and my friends (*words of Patient 2*).

My sister and I look alike but she has attractive dimples so, I decided to have dimples but I was afraid from the pain. Okay, there was bearable pain for few days but with these dimples if the time returned to the back I would do it. If you want it just do it (*words of Patient 4*).

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

CONCLUSIONS

This simple open procedure described by the authors for placing a facial dimple provides a predictable outcome with minimal side effects or complications, which makes it an excellent operative choice compared to other techniques.

Disclosures

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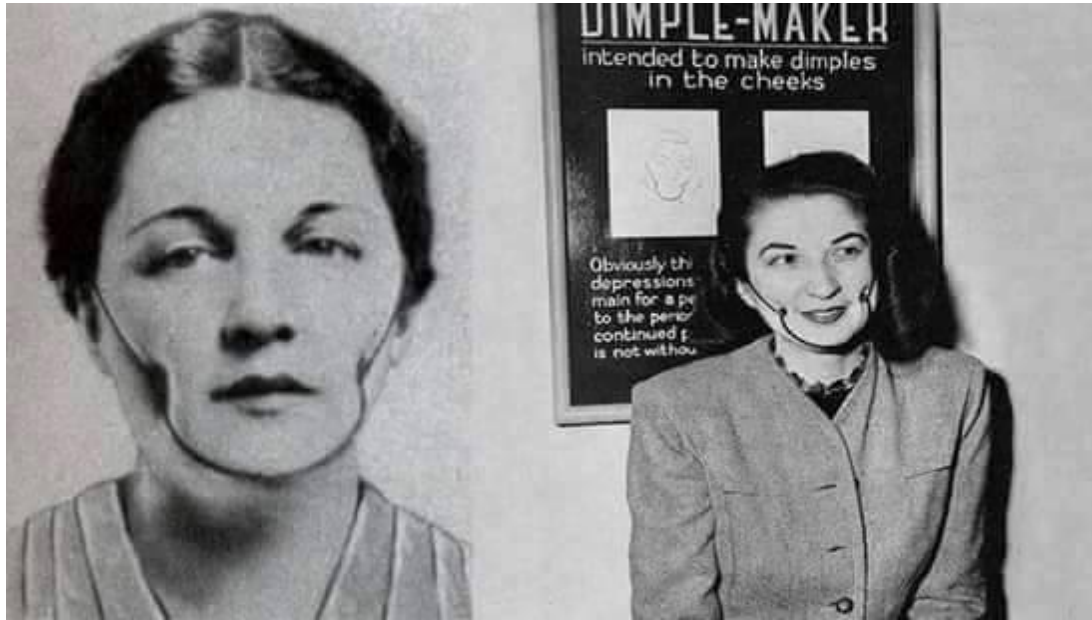


Fig. 1: The dimple maker brace intended to make cheek dimples ⁽⁵⁾



Anatomical site of cheek dimple

Fig. 2: Proposed site for facial dimple placement

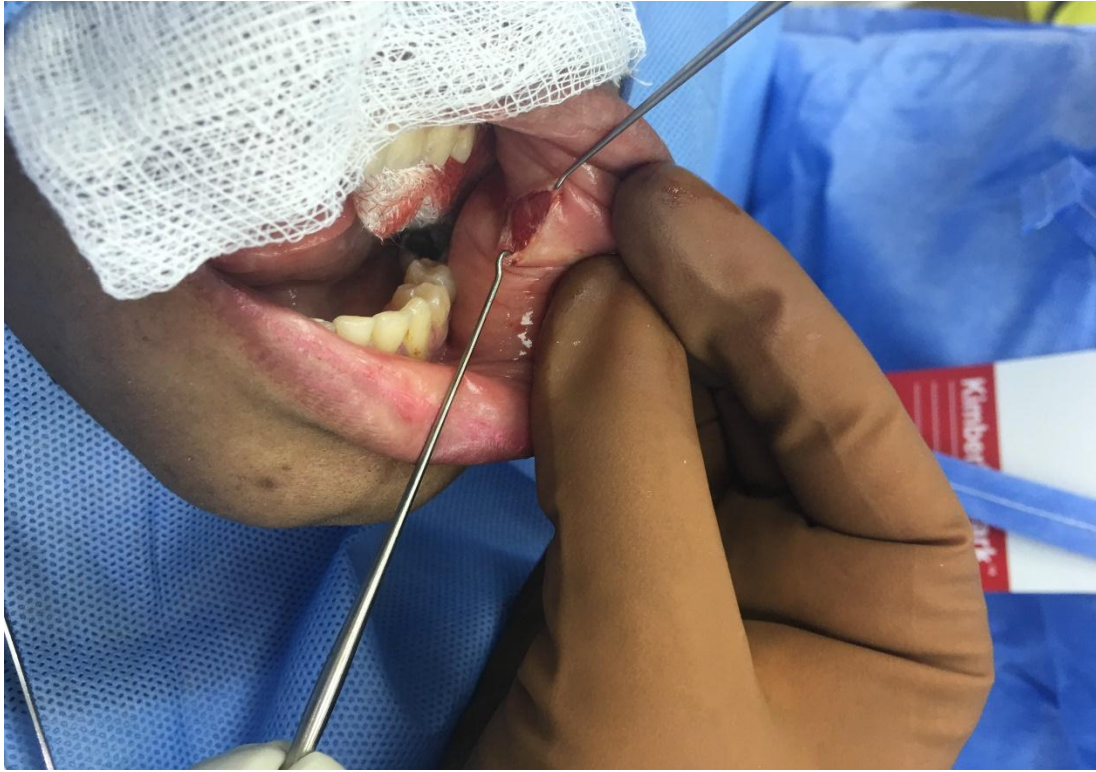


Fig. 3: Elevation of the mucosal flaps and exposure of the buccinator muscle



Fig. 4: Isolation of some fascicles of buccinator muscle

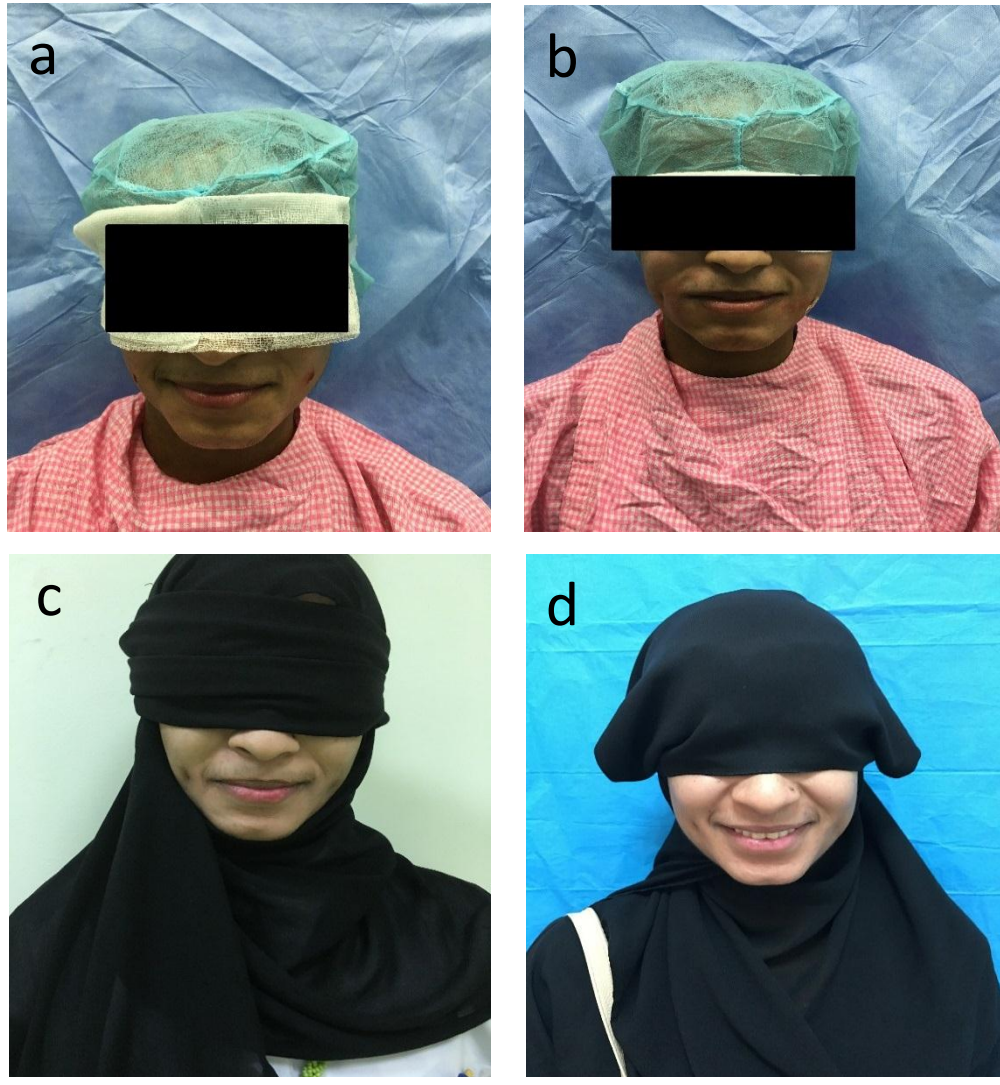


Fig. 5: One of our patients came for bilateral dimple creation, **a.** pre-op photo with the site marking, **b.** immediate post-op view, **c.** 2 weeks post-operative visit and **d.** 3 months post-operative



Fig. 6: A patient came for bilateral dimple creation, she had one faint dimple on the left side already, **a.** pre-op photo, **b.** immediate post-op view, **c.** two weeks post-operative visit and **d.** one month post-operative