Surgical Correction of Congenital Double Lip

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Abstract

Double lip is an unusual clinical finding, considered to be a developmental anomaly, and usually involving the upper lip more frequently than the lower lip. It may be seen in isolation or in association with Ascher’s syndrome. It is caused by excessive areolar tissue and noninflammatory labial mucosa gland hyperplasia of pars villosa. During smiling, the lip is retracted, and the mucosa is positioned over the maxillary teeth, resulting in “cupid’s bow” appearance. The incidence of this anomaly is not known. It has been reported in cleft patients, following lip trauma, and as a consequence of lip-biting habits. It might pose esthetic or functional problems and may be a reason for psychological stress to the affected individual because of over shown hyperplastic lip tissue. Surgical treatment is indicated for the correction of this disfigurement. Various surgical techniques have been suggested to address the double upper lip anomaly. All of these involve the excision of excessive mucosa and the underlying tissue. This case series puts forward the surgical management of this rare anomaly in a relatively simple manner. Double lip is a subject of interest to the dental clinicians because they usually are the first professionals to detect, identify, and treat this uncommon condition.

Keywords: Ascher’s syndrome, blepharochalasis, double lip, elliptical incision

INTRODUCTION

Double lip is a rare oral anomaly that can be acquired or congenital, involving either or both but more frequently the upper lip. Double lip is defined as the appearance of excess tissue in the area of lips wet line during functional lip movements.[1,2]

The extra tissue mass is caused by excessive areolar tissue and noninflammatory labial mucosa gland hyperplasia.[1,3] During the fetal period, the mucosa of the upper lip is divided into two transverse zones, one of which is pars glabrosa close to the skin, and the second one is pars villosa, which is similar to the mucosa of the oral cavity.[4] Double lip is hypertrophy of the pars villosa supposed to arise during the 2nd and 3rd months of intrauterine life.[1]

The persistence of exaggerated horizontal sulcus between the pars glabrosa and the pars villosa is supposed to arise the congenital type of the double lip.[1,2] Whereas the acquired form of the double lip is thought to arise from trauma, mechanical irritation, or oral habits such as sucking the lip between diastema or between ill-fitting dentures.

This deformity may be present at birth and becomes more prominent as the patient grows and permanent teeth erupt. It may occur in isolation or as a part of Ascher syndrome.[6,7]

Although the double lip rarely has any functional implications, the most common complaint by the patient is for esthetic reasons. Double lip appearance is evident when the patient smiles or when the lips are stretched. During the activity of orbicularis oris, muscle fibers stretch and the extra tissue mass which has no fiber penetration droops down and becomes clearly visible as a second upper lip.

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There has been no race or gender predilection recorded, except for the recent report in 2009 suggesting a male predilection of 7:1.[7]
Various surgical techniques have been employed to address this problem. Recently, a mucosa sparing technique for double lip correction has also been suggested. The present case series describes a series of three cases in which a simple anesthetic and surgical technique has been followed with satisfactory esthetic results.

**Planning/assessment**

On history taking, patients in the present study reported unesthetic appearance while smiling due to the appearance of two upper lips, difficulty in speech and mastication, and social handicap. Intraoral examination revealed that excess tissue was of soft consistency, fluctuant, and nonpainful on palpation with slight mobility. Redundant tissue also made an appearance of the second upper lip beneath the anatomical upper lip during smiling. The overlying mucosa was normal and intact in appearance. The lower lip was intact without any abnormality. Before proceeding to surgery, a provisional diagnosis of the bilateral congenital double lip was established in all the three presented cases. There was no familial history of the congenital double lip. Then, the surgery was planned using a transverse elliptical incisions technique after proper Phase I therapy.

**Case Series**

**Case report 1**

A 28-year-old male patient reported to the Department of Periodontology of a tertiary hospital, with a chief complaint of dirty teeth and unpleasant smile. On intraoral examination, there were no remarkable findings other than plaque and calculus deposits. However, when the patient kept his lips apart, an extra bulk of the upper lip was observed. On smiling and stretching, a clear demarcated extra bulk of the upper lip looking similar to cupid’s bow appearance was seen. On
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Blepharochalasis has been found to develop years after birth, it became obvious only on the eruption of permanent teeth. It most commonly affects the upper lip and generally appears as two separate folds of hyperplastic tissue on either side of the midline. Although present since birth, it became obvious only on the eruption of permanent teeth. Normally, the double upper lip is not seen when the lip is at rest. The hyperplastic tissue shows beyond the vermilion border when the lip is stretched during smiling or laughing. However, the patients in the present case series had shown redundant upper lip tissue even at rest, which became pronounced during smiling or laughing.

Central constriction with a double upper lip is seen in some cases due to the attachment of the upper labial frenum same as seen in one of the cases of present case series.

The exact etiology of the double lip is unknown. It might be transmitted as an autosomal dominant disorder. It has been found to be associated with Ascher syndrome, a triad of double lip, blepharochalasis, and nontoxic thyroid enlargement, as described by Ascher, an ophthalmologist. This was unlike present case series, in which no other significant systemic involvement with congenital double upper lip was seen. Nontoxic thyroid enlargement may be present in only 10%–15% of cases of Ascher syndrome, hence not considered essential in the diagnosis of the syndrome. Blepharochalasis has been found to develop years after the diagnosis of the double lip, demarcating the progressive nature of Ascher’s syndrome. It might be possible that the patient may develop Ascher syndrome later, which can be seen only when the patients came years later for follow-up.

The differential diagnosis of double lip includes chronic enlargement of the lip as seen in hemangioma, lymphangioma, angioedema, and cheilitis glandularis. In the fetus, the mucosa of the lip is divided into two zones: an outer zone (pars glabrosa) that is smooth and similar to skin and an inner zone (pars villosa) that is villous and similar to the oral mucosa. Double lip is the result of hypertrophy of pars villosa, results from exaggerated horizontal sulcus between pars glabrosa and villosa during lip development.

**Case report 2**

A 26-year-old male reported to the Department of Periodontology, of a tertiary hospital, with a chief complaint of an unnatural smile and halitosis. On intraoral examination, there were no remarkable findings other than plaque and calculus deposits. His family and medical history was noncontributory. Surgical management following Phase I therapy was done as per the described surgical protocol, and the outcome of the surgery was satisfactory.

**Case report 3**

A 29-year-old male reported to the Department of Periodontology, of a tertiary hospital, with a chief complaint of redundant upper lip tissue even at rest, which became pronounced during smiling or laughing.

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Surgical treatment is the only treatment modality for the correction of the double lip. Important aspects must be considered before surgical correction. The indications include esthetics, interference of excess tissue with mastication or phonetics, or development of lip biting or sucking between teeth or dentures. Various procedures to correct the same have been described. Guerrero-Santos and Altamirano described W-plasty. Simple excision by elliptical incision was advocated by Reddy and Roa for patients without central constriction, whereas double ellipse incision with vertical Z-plasty was demonstrated by Eski et al. in patients with short midline constriction.

The surgery involves the excision of excess mucosa and submucosa without the underlying muscular layer and is done either under LA, using infra-orbital nerve block with or without ring block or under general anesthesia. In all of the cases of the present series, the LA was achieved using local infiltration around the excess tissue using a hypodermic needle. The only precaution was to mark the area to be excised before administering LA and waiting for 8–10 min after injecting the LA. We feel that this technique makes the lip tissue a bit firmer, which was otherwise very loose and difficult to manage during surgery and would have bled profusely too.

The surgical technique done in the present study was transverse elliptical incision. The choice of surgical approach depends on the condition of the lip tissue, preference and experience of the surgeon concerned. Other surgical methods include electrosurgical incision and triangular incision. The patients in this case series were followed up for 18 months postoperatively, during which recurrence of the double upper lip or the development of blepharochalasis was seen. All three patients were highly satisfied with their appearance.

Conclusion
Treatment of congenital double upper lip is indicated when the redundant tissue interferes with mastication or phonetics or leads to the development of lip sucking or biting. The importance of treatment is high due to the esthetic concern of the patients. Double lip is of special interest to dental clinicians, as they are among the first professionals to detect, diagnose, and treat this uncommon condition.

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the form, the patients have given their consent for their images and other clinical information to be reported in the journal. The patients understand that name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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Conflicts of interest
There are no conflicts of interest.

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