Case Report

Management of Unilateral Transverse Facial Cleft

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Abstract

Objective: *Transverse facial cleft is one of the atypical form of clefts which involves others structures developed from first and second brianchial arches. The estimated occurrence varies from 1 in 100 to 1 in 300 of all facial clefts. This case was analysed on the basis of analysed, grading and associated anomalies. Studies have shown that the reasons for late diagnosis, poverty, lack of awareness, fear of treatment are possible causes for late treatment. Application of z plasty technique in the skin and subcutaneous tissue are important manoeuvres for improving the surgical results.*

Key wards: *Craniofacial anomaly, Macrostomia, No. 7 cleft, Transverse facial cleft.*

Introduction

Facial cleft means an opening or gap in the face or malformation of a part of the face.[1] It includes all sorts of clefts like cleft lip, cleft palate, transverse facial cleft, oblique facial cleft. Among these facial clefts, transverse facial cleft is one of the atypical forms of clefts which involves other structures developed from first and second branchial arches. Transverse facial cleft results when embryonic mandibular and maxillary processes of first branchial arch fail to fuse due to failure of mesodermal migration and merging to obliterate the embryonic grooves between maxillary and mandibular processes to form the angle of the mouth at its normal anatomic position during 4th and 5th week of development.[2,3] Transverse facial clefts are more common in male. Slight widening of angle of the mouth may appear in mild case, in moderate case cleft may extend up to anterior border of masseter and extension may be beyond anterior border of masseter in severe case. Transverse facial cleft has multifactorial inheritance, both hereditary and non hereditary causative factors.[4]

There are many techniques have been published in the literature such as z-plasty, w-plasty, triangular flaps and straight line closure. z-plasty is one of the best option.[5]

Case report

A 9-month-old baby boy presented with a very wide mouth since his birth and compromised feeding. According to the patient's mother's statement, he was firstly admitted into Dhaka children's hospital after 3 days of birth for difficulty of sucking and widening of angle of the mouth and then in Dhaka dental College hospital for better treatment.

It has been known from the history obtained from patients' parents that he suffered from pneumonia and common cold after birth. He had to take medication for common colds and allergies sometimes because of a generalised rash. There was no family history of congenital anomalies. Doctor gave no clue about this abnormality in the prenatal period by examining the ultrasound. He was born at 9 months of gestation by caesarean operation.

On examination, there was a typical extension of lip commissure bilaterally, more marked on the left side (approximately 2cm). The patient also had an incomplete lip, hypoplastic mandible, short nasal bridge, prominent zygoma and high palatal vault. Velo pharyngeal incompetency was present. Patient was slightly anaemic and ECG showed sinus tachycardia. Other systemic examinations of the patient revealed no abnormality and blood, urine analysis was all within normal limits. Eruption of deciduous maxillary incisors was completed.

Surgical repair of left sided transverse facial cleft was done by following z plasty technique. Patient was prepared for surgical repair under the plato of neo-commissure by following 60-degree protocol. After following all aseptic procedures, 2 incisions were given only in skin and subcutaneous tissue. After reflecting cutaneous flaps, they were transposed and repositioned and sutured with 5-0 vicarly and 5-0 vicarly of mouth was repaired by mucosal flap from upper lip. Per operative cardiac arrest occurred which was managed by giving CPR. After 3 month follow up no cardiac abnormality is detected

Discussion

Congenial macrosomia is a rare, atypical facial cleft seldom occurring alone and frequently associated with other anomalies. It is male predominant anomaly with a ratio of approximately 3:2. The estimated occurrence varies from 1 in 100 to 1 in 300 of all facial clefts.[6] Several classifications are known for clefts like American association of cleft palate rehabilitation. clefts and Vander Meuleman of them, the best classification of facial cleft is that given by Paul Tessier. In the Tessier system, clefts numbered 0 to 7 of the lower hemisphere

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represent facial clefts. This study is reported a case of Tessier 7 cleft. It is multifactorial, both genetic and environmental factors are responsible, it is usually difficult to single out specific etiological factors. Our patient has no family history. Medication or treatment during pregnancy.[7] On examination patient had atypical lip extension bilaterally, incompetent lip, hypoplastic mandible, short nasal bridge, prominent zygoma, high palatal vault.[8] Surgical reconstruction is the pillar of the management of the defect. Z plasty technique following 60 degree was used in our patient under GA. Two cutaneous flaps were Produced and then transposed and repositioned. In the 6 months following up, there was marked improvement in appearance and function.

Figure 1

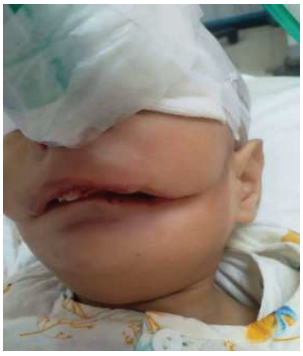
Figure 2-Unilateral transverse facial cleft, pre operative


Figure 3-Marking of Z plasty


Figure 4-Skin sutured and accurate alignment of the white line vermilion ridge and a Z interposed in the skin


Figure 5-Follow up after 6 months

Transverse facial clefts have a significant impact on both appearance and function. Although, There are several techniques for repairing facial clefts. In the case report, we chose to follow z platy and the outcome was satisfactory both aesthetic and functional. Emphasis should be given on few technical aspects of repair like suturing the bellies of orbicularis oris must be done with care. Recreating the modiolus can be done satisfactorily by z platy.

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