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Median Cleft of Lower Lip and Mandible: A Case Report

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Summary

A rare case of complete midline mandibular cleft involving lower lip, floor of mouth, base of tongue and anterior neck is being reported after satisfactory completion of first stage of reconstruction. Repair included the management of ankyloglossia by separation of tip of tongue from the floor of mouth and closure by mucosal flap from cleft site and repair of cleft lip and soft tissue of chin and neck by Z-plasty.

Case Report

A 10 days old female child, product of full term (37 weeks of gestation) normal delivery presented with deformity of face since birth. There was no history of exposure to any known teratogenic factor during antenatal period. Initial general examination revealed an active, thriving infant with normal contour of upper face and head. Local examination of cleft area revealed complete cleft of the lower lip with margins of the cleft adhered to the mandible that was separated by a gap of 1cm in the area of symphysis. The tongue presented a deep anteroposterior groove in the midline with a slightly bifid tip, which was bound down to the tissue between the two halves of the lip and to the mobile ends of the mandible (Fig 1). The upper lip, nose and palate were normal. There were no other congenital anomalies.

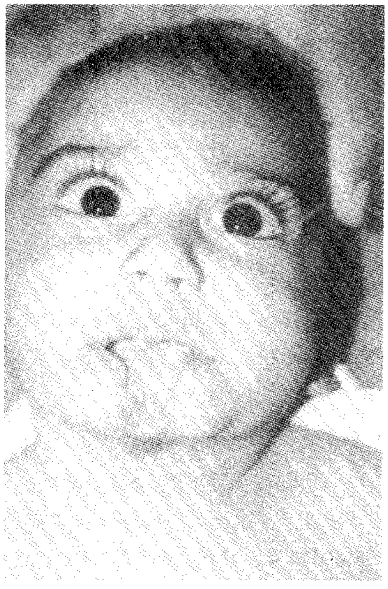

Fig 1. A ten days old female child with median cleft of lower lip and mandible

X-ray examination confirmed the cleft of the mandible. Hyoid bone was not visualized. Operative repair was under taken at 6 months of age.

Operative Procedure

The tip of tongue was freed from the mandible and base of tongue was undercut to separate it from the floor of mouth and was closed primarily (Fig 2). No attempt was made to correct the bifidity of the tip at this stage. No

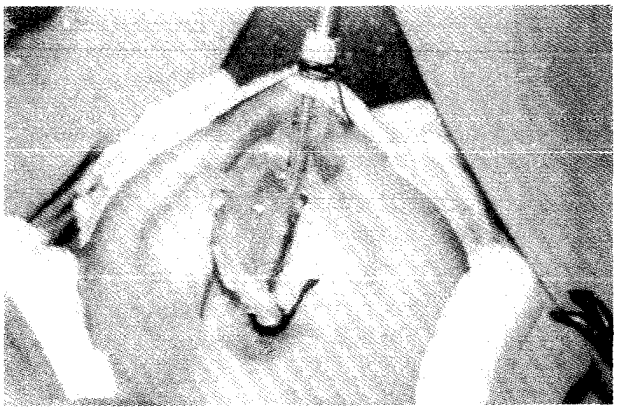

Fig. 2 Marking for release of the tongue

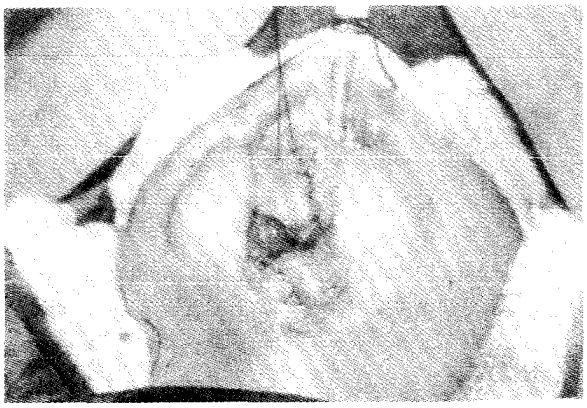

Fig 3. Photograph after release of the tongue

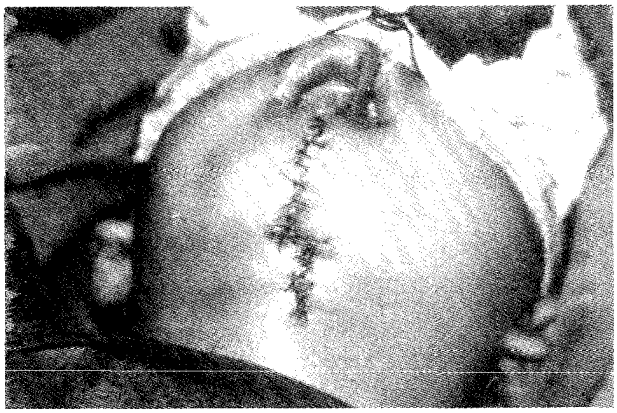

Fig 4. Lip and chin defect closed after release of the tongue

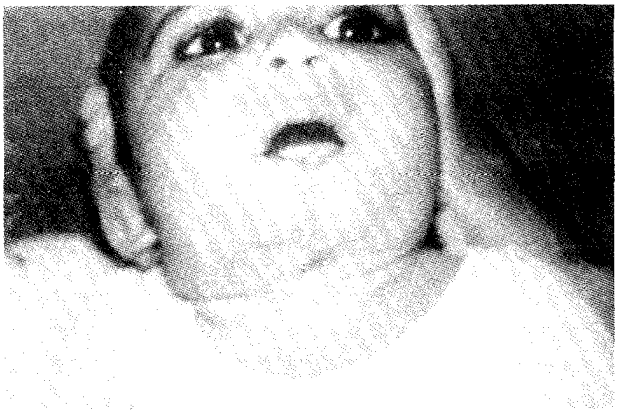

Fig 5. Post-operative result after suture removal

attempt was made to fix the two ends of mandible, as there was a bone gap of about 1.5 cm in front of the chin. It was decided to do a bone graft at a later stage to give a normal width to the chin. The lip and chin were then closed in layers with a Z-plasty made in the lower part of the incision on the chin (Fig 3 & 4). The post-operative results were satisfactory (fig 5).

Discussion

Congenital deformity of the lower half of the first brachial arch (mandible) is much less common than similar deformity of the upper half of this arch (maxilla). Midline cleft of lower lip, mandible and tongue may present with varing degree of severity and is sufficiently rare to merit reporting[1-3]. The first case was reported by Couronne in 1819 as reviewed in literature by Monroe[4]. The etiology is thought to be failure of mesodemal migration up to midline structures of the mandibular arch. There is a wide variation in the severity of this failure ranging from a minor cleft of the lower lip to a complete cleft with wide loss of supporting structures of neck[5,6]. Morton and Jordon[7] feel that the failure of mandibular processes to fuse may keep the ventral ends of the succeeding arches from uniting as the fusion proceeds from above. This may explain the absence of the hyoid bone, thyroid bone, thyroid cartilage, strap muscles and manubrium sterni in very severe cases. Cases with varying degrees of severity have been managed by different surgical procedures by surgeons all over the world but their number is still very small[1-3,8,9].

The operation was planned in two stages: In first stage soft tissue repair was done. In second stage chin reconstruction surgery at 9 yrs of age utilizing vascularised bone grafting is being planned.

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