

Alterations in Surgical Method of Tessier Classification Number 7 Cleft

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Abstract

Background: A Tessier classification No.7 cleft is an uncommon malformation that result from a failure of mesenchymal fusion within the maxillary and mandibular prominences of the 1st pharyngeal arch. Many operation technique have been proposed to restore function and improve aesthetic. Repair of a No.7 cleft by a modification of the surgical method and an appraisal of operative outcomes were reported herein. (1-5)

Methods: A retrospective review was conducted involving 15 patients with No.7 cleft who underwent surgery between September 1996 and September 2009. The average age at the time of repair was 8 months (2-24 months). The mean follow-up was 49 months (3months to 13years). The change in surgical method included skin closure, attachment of orbicularis oris muscle, and position of repaired commissure; which were analysed with a review of medical record and the outcomes of surgery were analysed via photographs. Specifically, the method of skin closure was changed from a Z-plasty to a linear closure, the orbicularis oris muscle overlapped attachment was replaced by a side-to-side approximation with horizontal mattress sutures, and the position of the repaired commissure was changed from 1 mm laterally to 1 mm medially reference to non-cleft side (Figure 1).

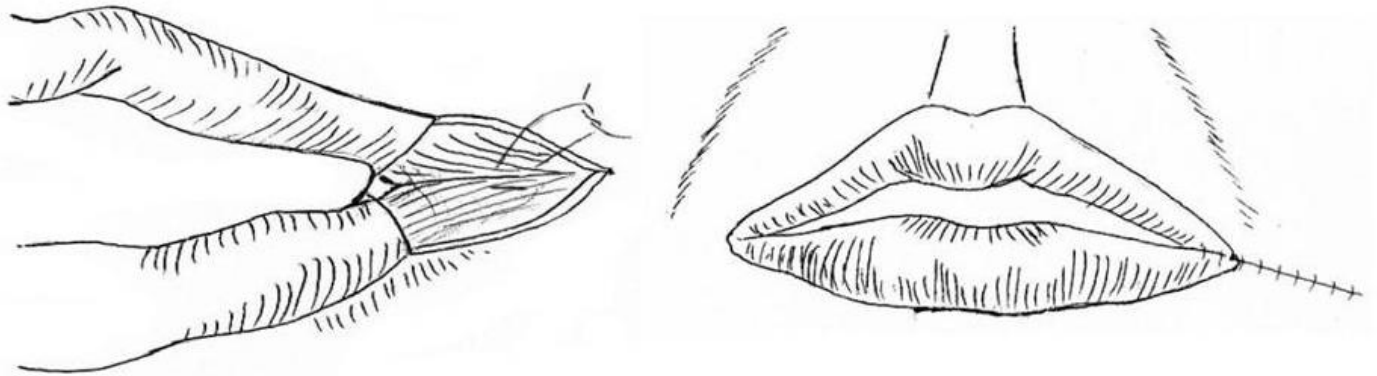


Figure 1. (Left) Orbicularis oris muscle is approximated side to side with horizontal suture. (Right) Skin was closed by linear closure.

Results: A Z-plasty caused additional cutaneous scarring, an overlapped attachment of the orbicularis oris muscle caused a thick oral commissure, and repaired commissure migrated to lateral side, so a 1mm, laterally-positioned commissure caused asymmetry. The altered procedure included a linear skin closure, a side-to-side orbicularis oris muscle approximation, and a 1mm, medially-positioned commissure, which together resulted in good outcomes.

Conclusion: The altered procedure for repair of a no.7 cleft as described herein, yields a short scar, no functional problem with the orbicularis oris muscle, a thin oral commissure, and symmetry of the repaired commissure.

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