

Reconstruction Of Lower Lip By Neurovascular Fan Flap

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Key Words

Full thickness Defect.

Summary

Full thickness excisional defects of upper and lower lips are normally reconstructed by local tissues such as remaining lip segment, and adjacent cheek tissues, whenever possible or by regional or distant flaps when defects are large.

Disadvantages inherited in all these flaps are loss of continuity of oral sphincter because of interruption of orbiculari oris muscle continuity and aesthetical unsatisfactory results. In present case a technique is used where above factors are overcome.

INTRODUCTION :

Reconstruction of the full thickness loss of the lower lip by Gillies fan flap results in a totally denervated lip. This new neurovascular fan flap preserves the nerve and thus retain both motor power and sensation in the reconstructed lip.

A defect which measures less than one third the lower lip can be closed directly by sutures

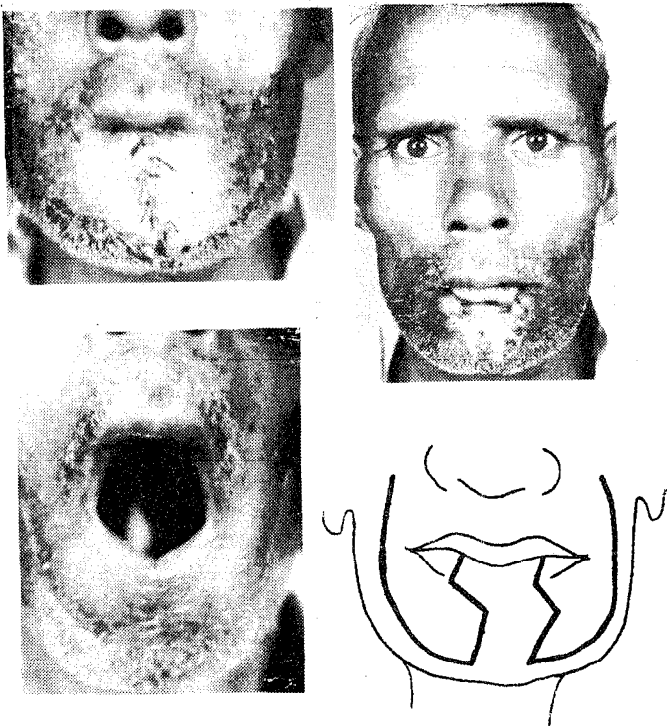
without causing undue complications. When a defect is larger but of a moderate size, this flap as a rectangular flap or if is a large one, by rotation of this flap, one can achieve superior results.

Case Report

A 50 year old male was admitted in the Plastic Surgery Unit with two third loss of the lower lip caused by human bite. Both the angles were not involved.

wound was cleaned and tattered edges were excised. Curved skin incisions were then made from the lower end of the defect backwards and extended all the way upto the base of alae as shown.

Photograph



Figures :

1. Pre-Operative.
2. Post-Operative Showing Sutures.
3. Adequate Mouth Opening Post-Op.
4. Schematic Representation of Incision Line and Nerves Around.

The muscles which make the oricularis oris complex, were then divided and the nerves, motor and sensory, and the blood vessels crossing the incision lines were carefully preserved. The flaps created in this way on each side were advanced to the midline and sutured to one another, and the remaining skin lines were sutured to complete the primary closure.

DISCUSSION

Dieffenbach (1834) described a technique for reconstruction of the entire lower lip. He used large, rectangular full thickness cheek flaps advanced from each side of the face. This technique was modified by Adelman (Szymonowski, 1858), Nelaton and Ambredanne (1907) and May (1941). Gillies fan flap (1920), represents a further extension of this principle and is indicated when little of the lower lip remains for the repair. The fan flap, single or double, designed in this way, is totally denervated, but sensation returns gradually over a period of time. Motor activity is also restored but more slowly. (Mc Gregor 1989).

These problems of Gillies fan flap can be overcome by using neurovascular fan flap, in which the nerves and blood vessels crossing the line of incision are preserved. With preservation of the nerves the reconstructed lip retains both motor power and sensation from the outset.

CONCLUSION :

Neurovascular fan flap is preferred over the Gillies fan flap because of its virtue of maintaining an intact nerve supply, motor and sensory, to the reconstructed lip.

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