

Case Report

Karapandzic flap

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Abstract

For full-thickness lip defects, the choice of reconstructive option depends on the size of the defect. Defects of one-quarter to one-third of the upper lip can be closed primarily. Larger defects measuring one-third to two-thirds of the lower lip width may be closed with the Karapandzic, Abbe or Estlander flaps. If the commissure is involved, both the Karapandzic and Estlander flaps may be used; however, the Karapandzic is probably the better choice because it is better at maintaining oral competence. In the case of larger lower lip defects (more than two-thirds of the lip), if there is sufficient adjacent cheek tissue, the surgeon may employ the Karapandzic (for defects up to three-fourths of the lower lip width) or the Bernard-Burow's techniques (to reconstruct the entire lower lip). A case of post-traumatic, lower lip defect, reconstructed with a bilateral Karapandzic flap is presented here.

Key words: Karapandzic, lower lip reconstruction, local flap

INTRODUCTION

The lips are not only a major esthetic component of the face, but are also important for facial expression, speech and eating. Goals in lip reconstruction are to restore normal anatomy, oral competence and contour. These goals are easily attained following repair of small lip defects. However, restoring these characteristics of the lips in large defects remains a more arduous task.

Karapandzic flap

This is a sensate axial musculomucocutaneous flap based upon the superior and inferior labial arteries. It provides good oral competence and is useful for closing one-half to two-third defects of the upper lip and defects up to three-quarters of the lower lip. It is ideal in situations where no new lip tissue is required in central defects or lateral defects that involve the commissure. The blood supply is more robust than the Abbe flap, but the esthetic outcome is inferior. Because new lip tissue is not recruited, microstomia may result after closure of larger defects.

Technique

A semicircular incision of adequate length to close the defect is extended from the defect toward the

commissures. The skin incisions are made with a scalpel, and careful mobilization of subcutaneous tissues is achieved using electrocautery. By spreading the orbicularis oris muscle longitudinally along the line of the incision, or on a plane parallel to the fibers, separation from the adjacent musculature is attained while maintaining the nerves and vessels intact. Laterally, at the level of the commissures, the skin is incised only down to subcutaneous tissue. Careful dissection is needed to identify and preserve the labial arteries and buccal nerve branches. The flaps are rotated medially to close the defect, and a stay suture is placed after meticulous re-approximation of the vermilion border. The defect is closed in three-layers approximating mucosa, muscle and skin. Figure 1 below gives a schematic representation of the Karapandzic flap procedure.

Complications of this technique include microstomia and visible scarring. Secondary revision of the commissure is often indicated to prevent oral crippling in feeding, hygiene maintenance and denture placement. The circumoral scarring after this procedure is more noticeable because the scars do not lie in natural skin creases.^[1-3]

CASE REPORT

A 35-year-old female visited to our department with the complaint of spilling over of food and fluids during

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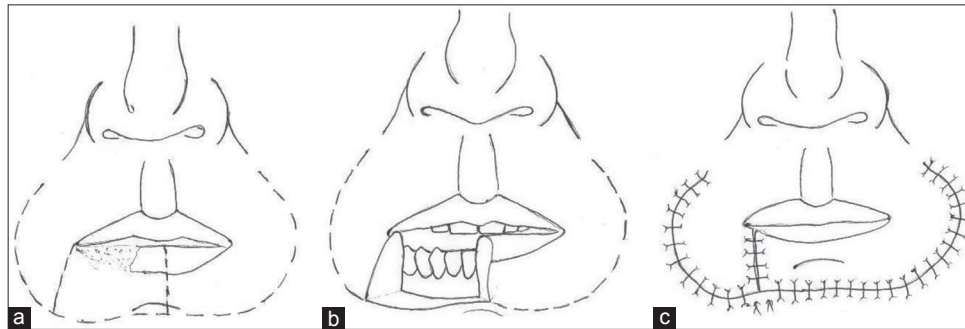


Figure 1: Schematic representation of the Karapandzic flap procedure. (a) Outlining of the surgical defect and the flap. (b) The lesion excised/surgical defect created/recipient site prepared. (c) Bilateral Karapandzic flaps sutured in place



Figure 2: Pre-operative photograph



Figure 3: Intra-operative photograph showing preparation of the defect for coverage by adjacent flaps

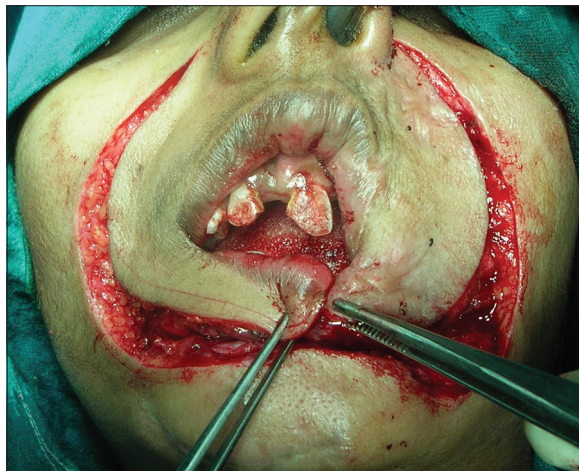


Figure 4: Intra-operative photograph showing harvested bilateral Karapandzic flaps to be apposed in position



Figure 5: Both flaps sutured in position

meals and inability to achieve a competent lip seal so much so that she had to take her meals very slowly, that too in a recumbent position. She had a history of road traffic accident around 4 months back, in which some teeth were avulsed, some were fractured, that had to be extracted and she had lost left half of the lower lip in addition to fracture left femur and various deep abrasions all over the body.

On examination there were numerous small scars over the left side of the face especially in the lower half around the ala of the nose. The left commissure was also formed of scar tissue. We planned to reconstruct the left half of her lower lip by means of bilateral Karapandzic flaps. The surgical procedure was explained to her in detail as well as the



Figure 6: 8 days postoperative photograph depicting healing



Figure 7: 6 months postoperative photograph depicting healing



Figure 8: 2 Years post-treatment photograph depicting mouth opening



Figure 9: 2 years post-treatment photograph depicting healing

possibility of microstomia. After a written informed consent, the surgical procedure was performed under general anesthesia. The preoperative [Figure 2], intra-operative [Figures 3-5] and postoperative photographs [Figures 6-9] are attached along with. Post operatively, as the continuity of the lower lip was restored, her function improved and she was able to take her meals without spilling over. There was microstomia of a very mild degree that was not objectionable to the patient.

CONCLUSION

Karapandzic flap is a good, robust flap for lip reconstruction when there is adequate cheek tissue for mobilization and when no new additional lip tissue is required. It is easy to master and affords coverage of large lip defects. The only disadvantage is poor

aesthetics as the final closure does not lie in the skin creases and microstomia that could be a problem if the defect to be reconstructed is large enough.

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