# The Donkey, The Fox, The Gun And A Lip

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**Citation**

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**Abstract**

The lips form an extremely important part of who we are. Speech, feeding and appearance are largely dependent on well formed and functioning lips. Loss of these organs results in social withdrawal, difficulty in speech, and may make it impossible to eat. Thus restoration of functional, sensate lips, that are hopefully cosmetically acceptable, should be the goal of every surgeon who sees these patients. This paper is a case report, in which the author reports on three patients who lost their lips through attacks by a donkey, a fox and a gunshot injury. The Karapanzic flap, used in all these patients, is briefly outlined, as well as the immediate and short-term results.

## INTRODUCTION

Ever watched or seen a person with a deformed or absent lip? Apart from the social stigma that they face, patients with lip deformities – whether congenital or acquired, have similar struggles in life.

Karen H. Calhoun captures the effects of lip deformity on patients perfectly when she writes, “This poor patient drools constantly. When he tries to chew, he cannot close the lips, so bits of food escape. Once liquids reach the posterior oral cavity, he can swallow them satisfactorily, but getting the liquids to that point is a near-impossible challenge. He cannot grasp a straw to suck in nor can he purse his lips to whistle. When he speaks, his articulation is imprecise... In short, the patient becomes an oral cripple...” ([1])

Lip reconstruction puts back the smile and an attendant self-confidence in the patient. Their lives are transformed, and they can live again.

I present case histories of three patients who were treated at AIC Kijabe Hospital with lip injuries and I also briefly describe the Karapandzic flap – easy to learn and fashion flap.

## CASE HISTORIES

1. Ma, a 7 year old boy was playing outside their house alone. Suddenly their donkey grabbed him by his scalp and dragged then held the boy in between his fore-legs his forelegs. As a lion feeds on his prey, the donkey so positioned the boy, and then proceeded to bite off most of Ma's upper lip. Angered villagers burnt the man-eating donkey.
3. The little boy was brought to the hospital, where he was found to have sustained a loss of over 80% of his upper lip, bites to his scalp, ear and right hand (dorsum).
4. After debridement, a reverse Karapandzic repair achieved primary reconstruction of his upper lip. The scalp and ear bites were sutured. The hand laceration was allowed to heal by secondary intention.
5. Though neither Ma nor the family has complained about the results, an Abbe flap could be envisaged, should they feel that the results are unsatisfactory. This would however add a new scar to an otherwise normal lower lip.

1. Fa is a 20 year old lady. At the age of 8, she was attacked by a fox, losing a little more than half of her lower lip, as well as fingers from both hands.
3. She presented to hospital at the age of 20 years, desiring to have her lip reconstructed. She had significant oral incontinence and she could not manage saliva or other liquids. Her speech was also difficult to follow. She was found to have lost all the fingers on her right hand, except the thumb, while on the left, she had the thumb and little finger left. All had been amputated at the metacarpo-phalangeal joint. She had adapted very well, and is able to perform all the household chores without difficulty.
4. Thick scar tissue was excised, the lip edges were freed up and a Karapandzic flap repair performed.

5. At her last review she complained that her lower lip felt a little tight, but was otherwise pleased with the results.

1. Om is a 24 year old young man. One year prior to presenting to us, he had been attacked and shot through the mandible by bandits. He did not attend any hospital, and was managed at home.

3. He was found to have lost more than 50% of his lower lip. He also had no teeth on his right hemi-mandible. A mandibular mal-union had left him with a prominence over the right mandible. He had oral incontinence, and his upper teeth stuck out.

4. The scar was excised and the lip ends freed up. A decision was made to leave the mandible as it was with a plan to re-examine him after the fitting of dentures. At discharge, he still had a prominent mandibular swelling.

## RESULTS

## SUGICAL TECHNIQUE:

The Karapandzic flap is an advancement-rotation flap that maintains both lip mobility and sensation. The flap provides excellent oral competence. It is more commonly used for lower lip defects but can also be applied to defects of the upper lip as the reverse flap. Careful dissection of the neurovascular structures entering the flap between the orbicularis oris musculature and surrounding facial musculature and soft tissue maintains both sensation and mobility. The major neurovascular bundles are found near the commissure. This flap also allows for the recruitment of neighboring cheek tissue into the reconstruction. Circumoral incisions are made in the nasolabial crease, with identification and preservation of the neurovascular bundles. The mucosa is only incised for 1 to 2 centimeters beyond the defect. Mucosa, muscle and skin are sutured separately. ([2],[3],[4],[5])

Like in many areas of plastic surgery, types of repair/reconstructive techniques abound. This author chose to use the Karapandzic technique because it is easy to perform, restores oral continence, maintains lip sensation and mobility, and is largely cosmetically acceptable. Its' main drawbacks are the tight lip and stoma that result, as well as the attendant scar.

This article reports three patients who had suffered loss of significant parts of their lips (Table 1)

**Figure 1**

| Patient | Sex | Age (yrs) | Cause and duration | Site (lip) | Amount of loss | Associated injuries | Repair | Results |
|---|---|---|---|---|---|---|---|---|
| Ma | M | 7 | Donkey | upper | >80% | Scalp, hand | Reverse Karapandzic | Tight upper lip |
| Fa | F | 20 | Fox | lower | 60% | Both hands | Karapandzic flap | Tight lower lip |
| Om | M | 24 | Gunshot | lower | 50% | Fracture mandible, edentulous | Karapandzic flap | Prominent mandible |

## DISCUSSION

The goals of lip reconstruction are the restoration of oral competence, maintenance of maximum oral aperture, mobility, sensation when possible, and maximize cosmesis.

Literature on lip reconstruction in the West deals largely with reconstruction after excision of lip or oral tumors.([6])

This author, on a search of PubMed and the internet could not find any references to the situation in Africa. Most African articles deal with cleft lip/palate repairs.

Various reconstructive methods for defect of the lip including the commissure have been described in literature. These methods may be broadly divided into three types:

- reconstruction using remaining lip tissue including direct closure [7,8,9];
- local skin flap with mucosal tissue [10,11,12]; and
- distant skin flap with/without mucosal tissue [13,14].

Local flaps for lip reconstruction such as the Karapandzic flap satisfy the twin goals of restoring structural integrity and functional competence in the oral sphincter. ([5]) A lip-switch technique uses temporarily pedicled tissue from one lip for reconstruction of a full-thickness defect of the opposite lip.

The method using remaining lip is the most ideal reconstruction in terms of anatomical matching. If the degree of smallness of the mouth and asymmetry can be controlled within the acceptable range by selecting appropriate cases and performing some modifications, the defect size which can be covered using remaining lip tissue alone may increased in range.([15])

This author chose to use the Karapanzic flap, simple, easy yet with very satisfying results for both the patient and surgeon. As is indicated in Table(1), the scar was my main concern, and may therefore warrant revision with time.

Certainly in the case of Om, excision of the bony prominence is necessary. Unfortunately, financial constraints are likely to prevent any further improvement in cosmesis.

Finally, I challenge both local and international publishers to make publishing of papers easier and cheaper, in order to enhance surgical scholarship. There has to be a way whereby a young surgeon is encouraged to write.

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