

Nasal Defects from Human Bite: Two Case Reports and Literature Review

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Abstract: We present two cases of nasal defects from human bite. In the first case a man had a misunderstanding with his wife and this resulted in a fight. The man was injured on the right thumb while the latter bit off his wife's nose. This was reconstructed in four stages using pedicle flaps. The second patient went to collect money owed him by a friend, the latter was offended and a fight ensued. While in a close struggle he bit off a part of his nose. The patient was scheduled for reconstruction while receiving wound care as an outpatient but failed to come for surgery. The reconstructed patient was satisfied with the outcome of surgery.

Keywords: Nasal reconstruction, delay procedure.

1. Introduction

The nose is a conspicuous projection in the centre of the face. It is important for respiration.

Abnormalities of the nose are associated with severe impairment of the body and personality because it is considered a great aesthetic element of the body. The external nose is made up of the nasal tip, columella, alae, dorsum and nasal bridge. Throughout history the nose has been amputated for various reasons^{1,2,5}:

(a) Adultery-- at various times in history the Greeks, Romans and Arabs had used nasal amputation as punishment for adultery. Unfortunately, this infamous punishment was often given to women. The man could usually get away by receiving a 100 strokes of the cane or by paying a fine. (b) Judicial punishment-- the Hammurabi code and the Hindu verdict medicine books show that nasal amputation had been used as judicial punishment. Even in England in the 16th and 17th centuries armed robbers had this treatment. (c) Duels and fighting in battles are the other instances in which this injury was inflicted. (d)

Political opponents--it is said that Emperor Justinian II was dethroned by General Leonzio in the year

695. The latter amputated the nose of Justinian II who managed to go back to the throne 10 years later and was known as the Rintomete Emperor because of the amputated nose. Daniel Defoe, the famous author of the book, Robinson Crusoe, narrowly escaped this infamous punishment for writing against the king. (e) University students in Germany in the 19th century also settled disputes with rhinotomy. The

Indian method of nasal reconstruction which uses forehead flaps started because of the need for nasal reconstruction after punitive rhinotomy³. Other methods of nasal reconstruction include the use of nasolabial flaps (French method)^{7,8} and the use of arm flaps (Italian method). The French method (Nasolabial flap) was used to reconstruct the nose in the index patient. The requirement for reconstruction depend on the amount of tissue loss and the components.

old primary school teacher who went to church for a religious programme at 5 pm and came back at 9 pm. She met her husband at a drinking parlour and together they went to the house. At home the patient's mother-in-law, who came to visit the couple for a few days, pointed out to her son that his wife has come back from the church very late. This resulted in a quarrel and the patient's husband tried to grab his wife but the latter escaped closing the door behind her and injuring her husband on the right thumb. The man pursued, caught her and bit her on the nose amputating the nasal tip and part of the alar nasi. She bled profusely but there was no dizziness and she was rushed to the Accident and Emergency Unit of the University of Calabar Teaching Hospital.

Past Medical History: Patient has no chronic illness and no previous surgery. Obstetric and Gynecologic history: She is para one but had four miscarriages because of beatings from her husband.

On examination the patient was conscious but anxious. She was moderately pale, the pulse rate was 92 beats per minute and the blood pressure was 110/80 mmHg. There was bleeding from the nose with loss of the nasal tip, 2/3 of the alar nasi bilaterally and 3/4 of the columella. Other systems of the body were essentially normal.



Figure 1: pre-operative picture

Case History and Management: The first patient is a 40-year

The following investigations were done: Complete blood

count gave a haemoglobin of 11g/dl, normal white cell and platelet count and morphology; urinalysis was normal and retroviral screening was not reactive. She had received analgesics, antibiotics and tetanus prophylaxis from the Accident and

Emergency doctors before the plastic surgeon was invited to see her. The second patient is a 27-year old trader who was owed some money by another man. The patient asked to be paid the money on two occasions without success. On the third visit his customer became offended and aggressive. This resulted in a fight and while in a close combat, his assailant bit off a part of his nose.

The patient presented at the Accident and Emergency Department of the University of Calabar Teaching Hospital where haemostasis was achieved by pressure dressing and tetanus prophylaxis, antibiotics and analgesics were given before the burns and plastic team was invited to take over the management.

On examination the patient was in stable general condition. There was a fresh wound on the nose with loss of 2/3 of the left ala.

Complete blood count, urinalysis and retroviral screening were unremarkable. The wound was dressed with sofratulle, gauze and plaster. He had tetanus prophylaxis, analgesics were prescribed for three days and antibiotics for five days on out patient basis but the patient failed to return to the hospital for treatment.

Nasal reconstruction of the first patient: This was done in four stages, namely:

- Delay procedure.
- Raising the flap.
- Flap division and inset.
- Flap defatting and contouring.

The delay procedure is an attempt to expose the tissue to relative ischemia before raising the flap and this is essential when the length/breadth ratio is high and tip necrosis is likely to occur. During the delay procedure, blood vessels rearrange themselves along the longitudinal axis of the flap, dilate and their blood flow increase. The size of the flap was a 3 cm piece of tissue in breadth from the lower border of the left nasal ala along the nasolabial groove and extending lateral to the angle of the mouth with a length of 8cm. Two parallel incisions were made on the skin along the landmarks described above and deepened to the subcutaneous tissue. An artery forceps was passed on the plane between the subcutaneous tissue and the facial muscles to bluntly divide the musculocutaneous vessels. The proximal and distal ends of this strip of tissue (the flap) were not divided. Nylon 2/0 suture was used to close the wound. This completes the delay procedure and the wound was dressed with sofratulle, gauze and crepe bandage. (b)

Raising the Flap: Ten days after the delay procedure the patient was taken back to the theatre. All the nylon sutures were removed. The distal end of the flap was divided and the flap was raised from its bed.

Homeostasis was attained by ligation with vicryl 3/0 sutures. The donor site was closed directly with the same sutures. The nasal wound was debrided and the flap, based proximally, was used to cover the nasal wound and sutured in place with vicryl 3/0. The wound was dressed with sofratulle, gauze and crepe bandage.

- Flap division and inset: Twenty-one days after raising the flap, it was divided and used to cover the
- Nasal wound.
- Flap defatting and nasal contouring: Three weeks after flap division and inset, excess fat was removed and unnecessary tissue was carefully removed to give the nose a normal shape.

2. Result

The patient was satisfied with the outcome of surgery.



Figure 2: Post operative picture

3. Discussion

The nose serves a vital role for the total well being of the patient. Apart from its physiologic functions, the aesthetic value and promotion of self esteem are very important for the patient. Throughout history and in various countries, in religious groups and political associations nasal amputation has been used for punishment of various offences and for political victimization^{1,2,3}. Nasal amputation from human bite is rare and probably a bite from the 'stronger sex' as seen in one of our index patients is even rarer.

However, nasal amputation from human bite between two drunken British army officers has been documented¹.

It is important to note that the patient's husband was beaten to death by an unknown group of men at night in what may have been a reprisal attack. In retrospect, the patient's husband would have been kept in police custody during the reconstruction because we think the result of surgery may have appeased the assailants. Incessant beatings of a spouse that caused up to four miscarriages is totally unacceptable but unfortunately the patient endured this battering until this climax in which she lost part of her nose and assailants killed her husband.

The option of a nasolabial flap to reconstruct part of the

alanasi, nasal tip and the columella was an attempt to hide the scar along the nasolabial groove. Some authors believe that this flap can be used for ala reconstruction but the nasal tip and columella are too distant for reconstruction with this flap. This is why we did a delay procedure to reduce the likelihood of flap loss from ischemia. The use of a forehead flap (the Indian Method) would give adequate tissue for this reconstruction but a midline forehead scar is not acceptable in a young woman.

The second patient is a man and had loss of part of one alar. He failed to come for reconstruction probably because of inability to raise funds for the surgery and besides men are more likely to endure living with a facial deformity than women.

4. Conclusion

The reconstructed nose was acceptable to the patient but her husband has died from injuries inflicted by unknown assailants. It is important to inform victims and relations of such injuries that reconstruction can be done. This may prevent reprisal attacks on the person that inflicted the injury.

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