

# NASAL FRACTURE: TO FIX OR NOT TO FIX?

The nose is the most commonly traumatised facial site, due to its prominence. A nasal septal hematoma is a feared complication that should be picked up as soon as possible, and the hematoma should be evacuated within 12 hours due to the potential of septal cartilage necrosis. Nasal septal cartilage necrosis can result in a saddle nose deformity with nasal obstruction and it can result in a nasal fracture with nasal obstruction and/or cosmetic deficits such as a saddle nose or crooked nose.

The critical window for a closed nasal reduction for treatment of nasal fracture is before two weeks in adults and before one week in the pediatric patient. The treatment for persistent nasal deformities beyond one month after injury may require a functional septorhinoplasty.

The nose is frequently traumatised in facial injuries and this often results from motor vehicle accidents, sports-related injuries and altercations. When the injury is significant, this can result in nasal fractures with its accompanying nasal deformity.

There are two main problems that nasal trauma can result in: a nasal septal hematoma or nasal fracture with nasal obstruction or nasal deformities.

## NASAL SEPTAL HEMATOMA

A nasal septal hematoma is one of the most feared complications that can occur through nasal trauma. Though uncommon, a septal hematoma can lead to complications such as septal abscess, septal perforation, and cartilage necrosis with potential saddle nose deformity.

A nasal septal hematoma can usually be diagnosed with a careful clinical examination, using a good light source with a nasal speculum. If a fluctuant reddish-blue swelling is noted on the anterior part of the nasal septum, drainage of the hematoma should be performed urgently to prevent complications as mentioned above.

## NASAL FRACTURE

A nasal fracture can be diagnosed clinically if there is gross deviation of the nose from its pre-injury appearance. An x-ray though frequently performed may not always be necessary, as it does not change the management.

You may apply the following first aid measures when a nasal fracture is diagnosed.

- If the nose is bleeding, apply digital pressure over the lower half of the soft fleshy part of the nose for 15 minutes to slow down bleeding.
- The head should be tilted forward during this time to prevent aspiration of the blood into the lungs.
- Place ice wrapped in a cloth or a bag of frozen peas over the nose for about 15 minutes at a time. This process can be repeated hourly throughout the day. Using ice packs at the time of injury and for one to two days afterward helps to reduce pain, swelling and nose bleeds. Take breaks between applications, and do not apply the ice directly to the skin.
- Take paracetamol or non-steroidal anti-inflammatory drugs (NSAIDs) to reduce pain. The pain is usually worse in the first five days after the injury.
- Nasal decongestant such as oxymetazoline can be used to help with the nasal obstruction. However, these should not be used beyond five days.
- Elevate the head, especially when sleeping, to avoid increased swelling of the nose. Prop the head up with pillows or lift the head of the bed by placing large blocks or phone books under the mattress.

A closed nasal reduction can be attempted within three hours of injury, before swelling sets in or between three days to fourteen days when the swelling has improved. This helps in the

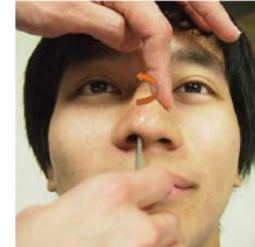


Figure 1: A closed nasal reduction being performed in the clinic with the patient awake with nose deviated to left. An elevator is used on the right side and digital pressure is simultaneously applied on the left to reduce the fracture.

evaluation of the precise nasal deformity that the patient is suffering from. This procedure can be performed under local anaesthesia and is frequently painless.

A satisfying “click” can usually be felt or even heard when the nasal fracture is pushed back in place (Refer to Figure 1). There is usually increased swelling over the nose and some periorbital bruising may sometimes occur post nasal reduction. Small amounts of nose bleeding is usually expected in the first 48 hours after a nasal reduction. A nasal cast is usually applied over the next week to protect the reduced nasal fragments. It is important that the patient avoids all contact sports (e.g. basketball, football) for the next six weeks following a closed nasal reduction, till the nasal fragments are healed in place.

## NASAL DEFORMITIES

Subsequently, post-traumatic nasal deformity is one of the most common reasons that patients seek consultation in the doctor's clinic. Depending on the type of nasal deformities, this can result in functional impairment and aesthetic problems. Two challenging problems to be addressed in the post-traumatic nose are the crooked nose deformity and the saddle nose deformity. The only definitive treatment for these conditions would be a functional septorhinoplasty, if it continues to trouble the patient. **GPBUZZ**

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