

Nasal Trauma

Nasal injuries comprise a significant proportion of all ENT referrals. Mechanism of injuries varies from sports related accidents to alleged assaults and a high suspicion of concurrent facial fractures is paramount.

Clinical findings

History of trauma

Initial epistaxis - vast majority settle with 1st aid alone. Very rarely, bleeds can be significant and life threatening.

Nasal deformity

Nasal obstruction

CSF rhinorrhoea/Otorrhoea - likely base of skull fracture (rare)

Patients are referred to ENT for these main reasons;

1. Nasal deformity
2. Septal haematoma
3. Uncontrolled bleeding

Nasal manipulation

After a nasal injury has occurred the nasal bones can appear deviated. In a short window post injury (approximately 2 weeks) when the bones are still healing, a manipulation can take place to reset the nose in a more cosmetic central position.

A period of around 4 days is usually allowed to all swelling to reduce prior to the decision to manipulate being made. However, if the trauma is very recent, such as during a football match, the nose can be manipulated before it swells up.

Nasal manipulation is usually performed under a general anaesthetic however it can be achieved under local. MUA is a very crude operation in which the nasal bones are pushed back into alignment. MUA only works on bony deviation and has no effect on a deviation of the nasal cartilage.

Manipulation rules;

- If injury < 2 weeks old - Arrange to review the patient in ENT five days (or as soon as possible thereafter) after the day of the injury. This allows any swelling to adequately reduce and aid analysis of deviated nasal skeleton.

- If Injury > 3 weeks – it is too late to perform an MUA operation. Advise the patient to see GP in 6 months if unhappy with appearance. The GP can then refer to OPD for consideration for septorhinoplasty. 2 - 3 weeks post injury is a grey area.

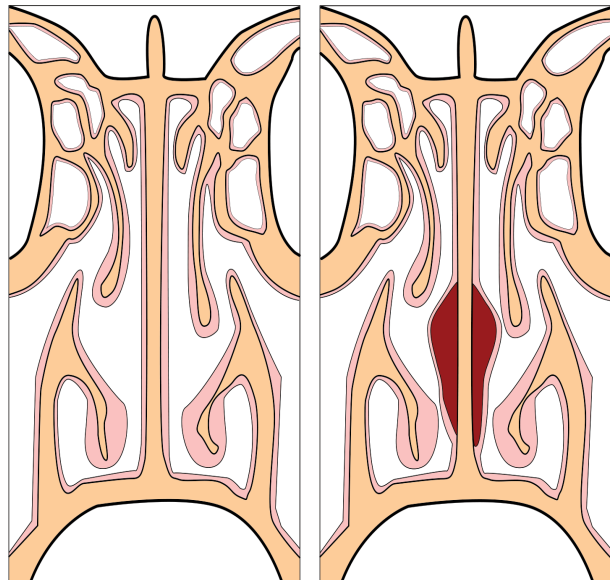
Septal haematoma

The single most important thing to rule out in a nasal injury is a septal haematoma.

A septal haematoma is a collection of blood or serous fluid between the perichondrium layer and the cartilage of the septum.

The image below shows the classic bilateral boggy septal swelling often seen. The diagram next to it shows schematically where the blood clot lies in relation to the septal cartilage.

Septal cartilage derives its blood supply from the overlying mucosa. When this is stripped off by a haematoma the cartilage becomes ischaemic and may die.



Clinical features (with percentage incidence)

- Recent history of trauma or septal surgery (all cases)
- Pain (often severe) over the nasal dorsum (50%)
- Unilateral / Bilateral nasal obstruction (95%)
- Unilateral/ Bilateral red Boggy swelling in the region of the nasal septum. – This is fluctuant when palpated with a probe.
- Rhinorrhoea (25%)
- Septal deviation is usually unilateral and will be hard when probed! Haematoma is soft boggy
- Fever (25%)

There are two reasons to stress the importance of not missing a septal haematoma.

1. **Nasal Septal Abscess.** The blood is potential space for infection. The septum lies in the triangle of danger. An area of the face that drains back into the brain via valveless veins. The end product can be an infective venous sinus thrombosis causing marked morbidity or even death.
2. **Septal collapse.** Remember the blood supply to the septum is poor and runs in the nasal mucosa. A haematoma can disrupt this blood supply and result in cartilaginous necrosis causing a marked nasal deformity and facial profile collapse. This deformity is colloquially known as a saddle nose deformity.

Management

Early treatment is essential to prevent complications

1. Admit. Keep nil by mouth
2. IV antibiotics and fluids. Septum lies in the danger triangle potential spread can be catastrophic.
3. Incision and Drainage, under GA, +/- insertion of a drain. This is performed on the day/night of admission.
4. The patient should be warned about the possibility of nasal deformity from collapse of the septum), despite I&D.