

Management of nasal injuries by UK accident and emergency consultants: a questionnaire survey

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[Go to:](#)

Abstract

Objectives

To determine how nasal injuries are managed by accident and emergency (A&E) consultants and produce a management protocol if the survey indicated a need.

Method

A postal survey of UK A&E consultants.

Results

The response rate was 59%. A great deal of variation was found between departments and clinicians regarding the training of junior A&E staff, the equipment available, the management strategies employed, and the reasons for referral to ENT or maxillofacial departments.

Conclusions

This survey shows that many more nasal injuries could be managed within the A&E setting without referral to ENT or maxillofacial departments. A flow chart of the optimal management of nasal injuries in Accident and Emergency departments is presented.

Keywords: nasal injury, nose, fracture, management

Nasal injuries are a common presentation to accident and emergency (A&E) departments. Their management primarily involves either simple reassurance or intervention. Patients requiring the latter need to be referred for further evaluation to otolaryngology (ENT), plastic surgery, or maxillofacial surgery, depending on local arrangements. However, it has been observed that many referrals are made for patients who require only advice and reassurance. Despite the common nature of these injuries, no studies have been published with regard to decision making and service provision in A&E departments or referral patterns in the management of nasal injuries.

In the absence of guidelines or national service protocols, we conducted a survey to investigate how A&E consultants in the UK managed nasal injuries and their referral strategies. We looked at blunt nasal trauma, leading to nasal pain and swelling, regardless of whether a fracture was present. Thus the aims of our questionnaire survey were to:

- determine how nasal injuries are managed by A&E consultants
- produce a management protocol if our survey indicated a need.

[Go to:](#)

Method

We undertook a postal questionnaire survey. A list of A&E consultants in the UK was obtained from **Error! Hyperlink reference not valid.** an online database of UK consultants and their departments. A postal questionnaire (appendix 1) was sent to 300 randomly selected A&E consultants from this list. The questionnaire consisted of a series of questions relating to the management of nasal trauma, and a number of scenarios relating to the management of patients with specific nasal injuries.

The returned questionnaires were analysed, and the results for all the answers for each question in the survey were grouped and are presented as percentages.

[Go to:](#)

Results

We sent the questionnaire to 300 consultants, of which 178 responded (response rate 59%). All types of department were represented in the survey with similar numbers of questionnaires received from consultants in teaching hospitals and large and small district general hospitals.

Figure 11 shows the number of nasal injuries seen per department. The majority of training is provided by senior A&E staff (70%), with a smaller proportion by ENT surgeons (28%), and rarely by maxillofacial surgeons (1%). One per cent of answers stated that juniors rely on a handbook for advice on nasal injuries.

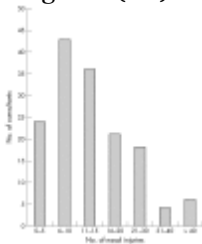


Figure 11 Number of nasal injuries seen per department.

Of the A&E departments surveyed, 87% had access to ENT clinics, and 99% of consultants did not routinely x ray the nose for nasal injuries. The equipment available in the consultants' departments was as follows:

- Headlight (32%)
- Silver nitrate sticks (55%)
- Nasal speculum (67%)
- Nasal decongestants (16%)

Figure 22 shows the examinations routinely carried out by A&E consultants on patients with a nasal injury. Table 11 displays the results of the answers to the set clinical scenarios.

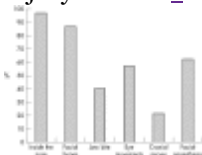


Figure 2 Proportion of consultants performing specific aspects of nasal examination.

	Discharge (%)	GP follow up (%)	A&E clinic (%)	ENT clinic (%)	On call ENT (%)
No swelling, no deviation, no complications	59	15	3	23	0
No swelling, no deviation, controllable haemorrhage, no complications	37	17	10	30	6
Controllable haemorrhage, swollen, no complications	28	12	14	45	1
Swollen + nasal obstruction, no complications	7	5	9	60	19

Table 1 How A & E clinicians would manage set scenarios of nasal injuries (n = 178).

[Go to:](#)

Discussion

Nasal injuries are a common presentation to A&E departments. According to the results of our survey senior A&E staff provide the majority of the training to junior staff. Nasal injuries are rarely x rayed, confirming that x rays neither aid decision making, nor are they necessary for medicolegal reasons.^{1,2,3} As ENT departments deal with the bulk of nasal injuries, we will assume that nasal injuries are all referred to ENT departments for the rest of this discussion. However, we acknowledge that in some hospitals local arrangements may dictate that maxillofacial or plastic surgery teams manage nasal injuries. In these cases, “referral to ENT” should be understood as referral to maxillofacial or plastic surgery as appropriate.

Most departments do not provide a headlight, but this is probably not necessary for the initial management of nasal injuries. Our survey revealed that 43% of consultants don't have access to silver nitrate sticks. These sticks are not essential for managing nasal injuries, but are important for the management of epistaxis. The survey questions on examination of patients confirms that A&E consultants routinely inspect the inside the nose for complications (septal haematoma, septal abscess, and cerebrospinal fluid leak) and for facial fractures, but external complications were not always excluded by assessing for orbital floor fractures (limited eye movements) and maxillary fractures (abnormal jaw bite and facial anaesthesia).

The survey results for the scenarios revealed a great deal of variation in the management of specific types of nasal injuries. Ideally patients with an undisplaced, non-swollen nose with no complications, whose epistaxis has resolved, should be discharged. But our survey showed that many of these patients are being referred to ENT clinics. In the absence of a deviated nose these patients would receive only simple reassurance in ENT clinic. In patients with a swollen nose (no complications internally or externally), the cosmetic appearance cannot be immediately assessed. A subsequent consultation is necessary if the cosmetic appearance is important to the patient. This can be undertaken in A&E clinic, by the patient's general practitioner, or in ENT clinic. Follow up is important to avoid missing the two week window of opportunity for performing a manipulation to correct a simple nasal deviation. Our survey showed that uncomplicated swollen noses are followed up on most occasions (72%). Presumably on discharge patients were advised about whom to contact if a cosmetically important deviation was present once the swelling has subsided.

A patient with an uncomplicated swollen nose and nasal obstruction may have sustained septal trauma. Thus they need to be re-examined once the swelling has subsided to assess for any new nasal deviation. If the nasal bones have sustained a cosmetically acceptable deviation then the patient needs to be seen

routinely in ENT clinic once the injury has healed with a view to elective septal surgery. In our survey, most (60%) respondents indicated that they would refer to ENT clinic; 19% would refer to the ENT on-call team. However, if a septal haematoma or any such complication is not suspected referral to the emergency team is inappropriate.

A&E consultants refer most (84%) cosmetically important new nasal deviations to ENT clinic. In patients with an uncomplicated, cosmetically unimportant new nasal deformity—for example in a frail, older patient, who does not want any intervention, discharge is the appropriate decision. According to our survey 55% of consultants would refer these patients to ENT clinic and 4% to the ENT on-call team.

There is no doubt that if any complication of nasal trauma is suspected, referral should be made to the ENT or maxillofacial on-call as appropriate. This was clearly demonstrated by the survey.

[Go to:](#)

Conclusions

Many studies have compared different methods of managing the fractured nose,[4,5,6,7](#) however, there are no studies on the initial management of nasal injuries or their referral patterns.

Our survey shows that potentially many more nasal injuries could be managed within the A&E department. A&E clinicians are very good at examining inside the nose, are well being aware of the need for early referral in complications of nasal trauma and the limited benefits of taking x rays in simple cases. However, it appears that A&E consultants refer many patients to the ENT department when reassurance and discharge would be sufficient.

Appendix 2 shows a simple flow chart that we have formulated from the comments on examination and management of nasal injuries in the chapter 'Fractures of the facial skeleton' in Scott-Brown's *Otolaryngology* (sixth edition),[8](#) which may act as an *aide memoire* for clinicians managing nasal injuries.

[Go to:](#)

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[Go to:](#)

Appendix 1

POSTAL SURVEY QUESTIONNAIRE SENT TO A&E CONSULTANTS

1. How many nasal injuries do you see per week?

0–5 6–10 16–20 21–30 31–40 >41

2. Who teaches the juniors about managing nasal injuries?

A&E consultants A&E Middle grade Other (please state)

3. Do you have ENT services within your trust?

Yes No

4. Do you routinely x-ray nasal injuries?

Yes No

5. What equipment do you routinely use when examining patients with a nasal trauma?

Headlight Nasal Decongestants

Nasal speculum Silver Nitrate sticks

Other (please state)

6. In patients with a nasal injury what would you routinely examine?

Inside the nose Cranial nerves

Facial bones Facial anaesthesia

Jaw bite Eye movements

Other (please state)

7. How would you manage the following nasal injuries?

	Discharge	GP	ASE	On call	Follow up	Clinic
Undisplaced, No Swelling, No complications						
Undisplaced, Controllable Haemorrhage						
No Swelling, No complications						
Swollen, No complications						
Swollen + Nasal Obstruction, No						

[Go to:](#)

Appendix 2



Figure 3 Flow chart for management of nasal injuries.

[Go to:](#)

Footnotes

Competing interests: none declared

[Go to:](#)

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