PostScript

LETTERS

What goes on in a paediatric resuscitation room?

We performed an activity analysis of the resuscitation room in our inner city paediatric emergency department. Data were entered prospectively onto a computer in the room by the nurse or doctor caring for each patient. Patient capture was checked against a separate audit in progress, and data retrospectively entered for missed patients ($n = 7$). The database was similar to that used in our adult resuscitation room,¹ but modified for paediatric use.

Between November 2003 and October 2004, 21 207 new patients attended the paediatric emergency department and 139 (0.7%) of these passed through resuscitation. This has implications when planning new facilities, and suggests that flexible or shared resuscitation facilities may be appropriate in units seeing similar numbers of children but where adults also attend.

The diagnosis of the resuscitation room patients is shown in table 1. The breadth of conditions is striking, but the data also tell us where education should be focused.

In the prehospital phase, one of these children was intubated, three had an intraosseous needle inserted, and one was defibrillated. This has implications for pre-hospital training and skills maintenance. Similarly, 17 children (12%) were intubated in resuscitation; four of these were in cardiac arrest, and drugs were used in only 13. This equates to one child per month, and suggests that it would be difficult for emergency physicians to learn and maintain advanced paediatric airway skills, even in a children's hospital.

The database is easy to set up and use. We found it useful for audit and governance purposes. We would be happy to answer any enquiries, or supply a copy on request.

Table 1 Diagnosis of children managed in the resuscitation room

Diagnosis	Number (%)
Seizures	31 (22%)
Trauma	22 (16%)
Apnoea/floppy spell	9 (6%)
Bronchiolitis	9 (6%)
Arrhythmia	8 (6%)
Asthma	7 (5%)
Cardiac arrest	7 (5%)
Burns/inhalation	6 (4%)
Pneumonia	6 (4%)
Anaphylaxis	5 (4%)
Diabetic Ketoacidosis	4 (3%)
Croup	3 (2%)
Sepsis	3 (2%)
Meningococcaemia	3 (2%)
Congenital heart disease	2 (2%)
Procedure	2 (2%)
Other	12 (9%)

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Ethics approval was not thought necessary at the time of activity analysis. The data were already routinely collected as part of several hospital audits and the database was also designed to unify the collection process.

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Reference

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Comparative elbow radiographs in children

Trauma to the developing skeleton in children is common, and elbow fractures account for 20–40% of all fractures. It has been demonstrated that the initial physical examination of upper extremities for gross deformity and point tenderness has a diagnostic sensitivity and specificity of 81% and 82%, respectively,¹ leaving a significant percentage of fractures dependent on x ray for diagnosis. However, fractures of the elbow are still some of the most frequently overlooked fractures in emergency medicine because of the complex radiographic anatomy of the developing elbow. Normal growth plates may be mistaken for fracture lines, and minimally displaced fractures are often under diagnosed. There is also considerable individual variation in the development of the ossification centres, which can be confusing.

It has been suggested that comparison radiographic view of the unaffected elbow may be helpful in evaluating elbow fractures,² but the routine use on every child with elbow injury is unjustifiable in terms of resources and increased radiation exposure for the child. It has even been shown that such comparison radiographs did not improve diagnostic accuracy in elbow trauma.³

To overcome some of these problems in our hospital, we have compiled two sets of normal elbow radiographs of children, one of each sex, encompassing ages one to eighteen years. They show serial growth changes taking place in the elbow from infancy to adulthood. Furthermore, a separate collection of abnormal radiographs has also been obtained to demonstrate common elbow injuries. In our experience, junior doctors have found them useful in aiding diagnosis when consultation with our radiology colleagues is impossible. It is our belief that this method will help to enhance rates of accurate diagnoses of elbow injuries, in

combination with physical examination findings and radiographs of the injured elbow.

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- 3 Chacon D, Kisson N, Brown T, et al. Use of comparison radiographs in the diagnosis of traumatic injuries of the elbow. *Ann Emerg Med* 1992;21(8):895–9.

Stilettoed in the sixties

One of the wonders of emergency medicine is that there are almost as many different causes of injury as there are injury types. It is therefore not surprising that there are a myriad of case reports in the literature describing unusual objects causing injury. However, some stories have already been told.

I read the case report by Stables *et al*¹ entitled "An unusual case of a compound depressed skull fracture after an assault with a stiletto heel" in *EMJ*, which claims to be the first, and was struck with the thought that this must have been described before. How could we have come through "the Swinging 60s" without this incident having occurred? Indeed, after a very brief search of "Google" using the keywords "skull fracture" and "stiletto heel" from the article, the third result is of a case report in the *BMJ* by Ahmed on "Stiletto heel penetrating fractures of the skull" dated 1964.²

This highlights two important points. First, it is important to remember that the regular Medline database only includes articles from 1966 to the present day, and it is necessary to search OldMedline for articles prior to 1966, or use Google as an obliging alternative.

Second, don't aggravate a girl with stiletto heels!

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- 2 Ahmed RH. "Stiletto heel" penetrating fractures of the skull. *BMJ* 1964;5412:801-2.

Reply: complications following attempted rapid sequence intubation

Dr Hulme raises several important points. First, rapid sequence intubation (RSI) is not to be taken lightly even by experienced physicians. It is fraught with danger that can be disastrous.

Second, I fully acknowledge that the second dose of succinylcholine should not have been given, but do not feel that this would have played out any differently. This patient had been losing his airway even before attempted RSI, and would have required one form of definitive airway. As stated in the article, several attempts by the attending anaesthesiologist at nasal intubation were also unsuccessful.

I also acknowledge that malignant hyperthermia should be considered in the differential diagnosis for masseter spasm. However, as stated in the discussion, this patient had no other cardinal manifestations of malignant hyperthermia. Unfortunately no biopsy was performed, so we will never know if he was susceptible or not.

Finally, discontinuing anaesthesia is appropriate during elective procedures (as stated in the article); however, this is not always prudent in emergent cases.

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Treatment of epistaxis in the emergency department

I read with interest Leong *et al.*'s article on the management of epistaxis¹ and I would like to add some tips that I would consider useful.

In the treatment of "active" anterior epistaxis, merely spraying the anterior cavity with a combination vasoconstrictor and local anaesthetic is often not enough to stem the bleeding. Using cotton wool, you can form a wick of about 5 cms long, and, after soaking

it in a solution of constrictor/anaesthetic, apply it with a Tilley's forceps into the bleeding nasal cavity. Ask the patient to apply digital pressure to the nose for about 10 minutes. The increased contact to the bleeding point in Little's area is more likely to stem the bleeding, and can then be localised and cauterised.

The "scorched earth" technique of cauterising a general area in the hope of stopping the bleed is not to be entertained as there is increased risk of septal cartilage necrosis. Using a torch and not a headlamp, and failure to use a nasal speculum, contributes to the aforementioned. If a bleeding point cannot be identified, cautery should not be attempted. The origin of the bleed might be posterior.

It is advisable to discharge patients with anterior epistaxis (that have been successfully treated) with an ointment/cream. If your department does not have Naseptin, you can advise the patient to put Vaseline on a cotton bud and gently roll it onto the affected area a couple of times a day. This stops the scab from drying out, becoming itchy, and then picked off prematurely, leading to rebleeding.

The digital pressure applied to the nose (fig 1b of article¹) is better applied with the fingers in a flexed, fist like position and the dorsal aspect of the middle phalanx of the index finger resting on the maxilla. The pinch action is then completed by applying the palmar aspect of the interphalangeal joint area of the thumb to the lower part of the nose on the other side.

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Reference

- 1 Leong SC, Roe RJ, Karkanevatos A. No frills management of epistaxis. *Emerg Med J* 2005;22:470-2.

C-reactive protein in the emergency department

I read with interest the report of a case of pneumococcal meningitis presenting as ankle pain.¹ Although it discussed the management of an interesting and highly unusual patient, I found it hard to follow the logic of the conclusion that "CRP is an important investigation for emergency departments".

As the authors state, C-reactive protein (CRP) is an acute phase protein. Levels of CRP are elevated in the serum of patients with acute and chronic inflammatory, infective, and neoplastic disorders. A recent systematic review by van der Meer *et al.*² examined the evidence pertaining to the contribution of CRP in patients with lower respiratory tract infections (such as pneumococcus). They found in 12 studies reviewed that the relation between an elevated CRP and a bacterial aetiology of the infection was poor: sensitivity ranged from 8-99% and specificity from 27-95%. Other studies in which CRP has been used as a diagnostic tool for other conditions have echoed these findings.

An audit performed by myself in a large teaching hospital emergency department found that between 250 and 500 CRP studies were being requested per month. These were being requested indiscriminately for the full spectrum of presenting conditions, from chest and abdominal pain to one patient that presented with a stab wound! Although individual tests were relatively cheap, because of the numbers being requested the total annual cost to the department was almost £13 000. As a literature review at the time found no evidence to support the use of CRP in the emergency department, departmental policy was altered to prevent the requesting of CRP as routine.

I suspect even the most skilled of emergency physicians may have found the diagnosis of pneumococcal meningitis based on a presentation of ankle pain difficult, with or without a CRP result. As CRP lacks the diagnostic specificity to be of help in the initial assessment of the patient, I feel that it is misleading to advocate its widespread use based on this case alone.

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