PostScript

LETTERS

Intracranial placement of nasopharyngeal airways: is it all that rare?

In their recent review on nasopharyngeal airways (NPA), Roberts *et al*¹ mention that the “evidence for avoiding NPAs in case of basal skull fracture is based solely on two case reports”.^{2,3}

This may be true, but how many instances of intracerebral NPA placement occur but are not published? Once a complication has occurred and been reported in a journal, further similar case reports are less likely to be submitted because it is no longer a novel complication.

We recently had another episode of accidental cerebral misplacement of an NPA in a trauma patient who later proved to have a base of skull fracture. The patient was a coach driver who was involved in a head on collision with a low building and sustained severe facial injuries. Extrication proved complicated, and the patient was trapped in the vehicle for approximately 45 min. His GCS was 3/15 when the ambulance service arrived and it was judged that his airway was at risk. The paramedics were unable to open his mouth and took the decision to insert an NPA. The precise method of insertion is not documented.

On arrival in the ED the patient was intubated and ventilated and underwent a CT scan of the brain. This showed multiple facial fractures, including severe disruption to the base of the skull. The NPA was seen to enter the cerebral cortex (fig 1).

We fully agree that airway management takes priority in the emergency situation and such advice is especially relevant in this type of patient when a contraindication to NPA placement (base of skull fracture) cannot be excluded clinically. However, it is also likely that suspected base of skull fracture has led to fewer NPAs being sited in patients with any form of head injury, perhaps leading to substandard airway care.

In some circumstances, NPA placement may be necessary even when there are relative contraindications and we support the author's claim that teaching on NPAs should focus on methods of safe placement. However, we would question the

authors' comment that the complication of intracranial tube placement is “oft quoted but very infrequent”.

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Manoeuvres affecting central venous cannulation

Clenaghan *et al*¹ have demonstrated that Trendelenburg tilt increases the diameter of the internal jugular vein (IJV) in healthy volunteers. This confirms the results of previous studies.²

Although the benefits of Trendelenburg tilt are well known, the negative effects of other commonly performed manoeuvres are less well appreciated. Gentle palpation of the carotid artery and neck extension causes significant decreases in IJV size.² Textbooks describe the IJV as lying lateral to the carotid artery but ultrasound studies show that it overlies the carotid artery to some degree in 54% of subjects. The degree of overlap increases with head rotation,³ which may increase the risk of carotid artery puncture, especially if the needle passes through the posterior wall of the IJV.

Carotid artery palpation, neck extension, and head rotation are often used during IJV cannulation. These manoeuvres decrease the target size and potentially increase the risk of failure or complications and should be avoided during IJV cannulation using a landmark technique.

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ATLS secondary survey mnemonic: Has My Critical Care Assessed Patient's Priorities Or Next Management Decision?

Since 1976 ATLS training and implementation has been instrumental in optimising treatment and saving the lives of trauma victims worldwide. Studies have shown that ATLS trained surgeons, anaesthetists, and medical students improve their clinical trauma management skills,¹ attaining a higher number of ATLS key treatment objectives.

On assessing the impact of trauma education in terms of clinical process, retention of skills and knowledge, and the outcome of patients, one study concluded that the generic (ABC) approach of ATLS training is applicable to the care of all critically ill or injured patients and should be taught at junior level.²

However, one study of 220 ATLS course graduates showed that physicians lose a significant part of their acquired cognitive knowledge after 3.5 years, that surgeons retain their cognitive knowledge for longer periods of time, and that the optimal time for a refresher course is between 3 and 4 years after the initial ATLS training.³

An injury may be missed or its significance may not be recognised in the trauma resuscitation scenario, particularly in the unconscious or unstable patient. The secondary survey “head-to-toe evaluation” starts only after the ABCDE primary survey is complete and the patient responds to resuscitation. In practice, the secondary survey can be haphazard, poorly recorded, and, in the aftermath of a more dramatic initial resuscitation, may be less thorough. There can be a substantial delay between the primary and secondary survey if immediate treatment or surgery is indicated; this discontinuity can compound errors of omission.

Table 1 Secondary survey mnemonic

Mnemonic	Secondary survey
Has	Head/skull
My	Maxillofacial
Critical	Cervical Spine
Care	Chest
Assessed	Abdomen
Patient's	Pelvis
Priorities	Perineum
Or	Orifices (PR/PV)*
Next	Neurological
Management	Musculoskeletal
Decision?	Diagnostic tests/definitive care

*Tubes and fingers in every orifice. Include “AMPLE” history.

Figure 1 CT scan of the brain showing intracranial placement of NPA.