

PostScript

LETTERS

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Head injury transfers: arm of greatest delay

In patients with suspected head injuries, the immediate purpose of a specific diagnosis is to determine which patients need an emergency or urgent neurosurgical operation. The teaching is that within two hours of injury, essential diagnostic studies should be completed, as delay can be extremely costly for the patient. In view of this emergency CT scans should be obtained as soon as possible ideally within 30 minutes after the injury.¹

Hospitals that transfer patients often have difficulties determining areas of delay. With this in mind, we decided to carry out a prospective study of all head injury patients with a GCS of <13 who required transfer. Our main objective was to determine the arm of greatest delay.

The period in question was January to June 2002. The total number of transfers during this period was 19. Of this number 11 were traumatic head injuries and 8 were non-traumatic (SAH).

The total time from arrival to disposal was a mean time of 227 minutes. Arrival time to scan had a mean of 32 minutes and scan to disposal had a mean time of 104 minutes however there was a considerable difference between traumatic head injury cases (135 minutes) and non-traumatic head injuries (59 minutes).

From the results, the greatest arm of delay lies in the disposal of the patient after CT. This was especially the case where the patient had sustained traumatic head injury. Closer scrutiny showed that when it was a traumatic injury, there was almost universal insistence on seeing the scans before accepting the

patient often resulting in taxi transfer of images.

The study raises some questions:

- Why see the scans images before sanctioning a transfer? Are there concerns relating to the radiologist's interpretation of the scans?
- Should it be a matter of policy that all isolated severe head injuries (GCS <8) be taken directly to the neurosurgical centres?

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A two year review of laryngeal mask use by the Warwickshire ambulance service

In 2001 the Warwickshire Ambulance Service introduced disposable laryngeal mask airways (LMA Unique, Intavent Orthofix, Maidenhead, UK) aiming to improve airway care by providing paramedics with an alternative device after failed intubation, and giving technicians an alternative to the bag-valve-mask.¹ In April 2003 we analysed the computerised record database and surveyed all paramedics and technicians to investigate LMA use over the previous two years.

Patient data

We searched the database for details about patients who had a LMA inserted during their care. The individual case report forms for these patients were reviewed when available. In 70 patients LMA placement was attempted, 61 (87%) placements had been recorded as successful. LMA insertion was recorded as successful in 24 of 25 (96%) patients when a technician attempted placement and 37 of 45 (82%) patients when a paramedic attempted placement. Intubation had failed in 29 patients and in 26 (89%) of these a LMA was successfully used to manage the airway (table 1). During this period there were 382 attempts at endotracheal intubation

with 85% success. Although primarily used in cardiac arrest (49 cases), LMAs were also used in "other medical" patients (seven cases) and trauma (six cases), with eight missing records. In three road trauma cases a LMA provided a clear airway when access was otherwise impossible. On nine occasions a functioning LMA was subsequently replaced by an endotracheal tube before arrival at hospital. In seven of these instances no clear reason was recorded.

Staff survey

A total of 134 staff surveys were returned (85% response). These questionnaires showed that 42 (36%) had never used an LMA in clinical practice, 52 (39%) had used a LMA once or twice, 34 (25%) staff had used the LMA three to five times, and six (4%) had used the device on more than six occasions.

We asked whether any patients who had received a LMA had been subsequently intubated before arrival at hospital. Of the 40 positive answers, 25 responses stated that the LMA was removed because of "operator preference" (23 paramedic, 2 doctor). The other responses to this question included six problems with ventilation and eight problems with securing the device.

Comment

The success rates are similar to those reported in the literature.^{2,3} The LMA has been used in a range of conditions, but is clearly unrivalled in situations where intubation has failed or is impossible.⁴ We are concerned that functioning LMAs are being removed in favour of endotracheal intubation, as there is little evidence showing that intubation improves outcome,^{5,6} especially in those sufficiently comatose not to require the use of drugs to facilitate this procedure. We feel that the introduction of LMAs in Warwickshire has achieved the aims that were intended.

Contributors

KP, IT, JT, and MW conceived the idea for the study. MW, IT, and JT designed the questionnaire. KP and JT collected the data. KP wrote the paper. The paper was discussed, revised, and edited by KP, IT, JT and MW. MW is the guarantor of the paper.

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Table 1 Prehospital ventilation with the laryngeal mask airway

	Number attempted placements	Number achieved successful ventilation	Success rate (%)
Total	70	61	87
After failed intubation	29	26	89
Paramedic attempts (total)	45	37	82
Technician attempts (total)	25	24	96

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Acupuncture associated pneumothorax

A 31 year old man attended our accident and emergency department complaining of shortness of breath and right chest pain on climbing the stairs at home shortly after acupuncture treatment to his longstanding painful right shoulder one hour earlier. The

acupuncture included needle insertion to the right scapular region, one of the needles caused sharp pain on insertion. The patient had no significant medical history and he never smoked.

On examination, he was not in any distress and his vital signs were normal. Examination of the chest suggested reduced air entry in the right apex but was otherwise normal. An erect PA chest radiograph showed a 5% right apical pneumothorax. The patient was discharged home with pneumothorax advice and a one week follow up chest radiograph was arranged but the patient failed to attend as he was asymptomatic.

Acupuncture is among the most popular of all complementary or alternative therapies. It is an invasive therapy and it is not free from risks for the patient. The style of acupuncture differs between cultures. The Chinese style acupuncturists tend to insert needles deeply into the muscles, while the Japanese style entails insertion into the subcutaneous tissues. Recent systemic reviews of the adverse events associated with acupuncture concluded that minor adverse events may be considerable but serious events were rare.^{1–3} The most common adverse events were needle pain, tiredness, and bleeding. Faintness, syncope, and needle breakage were uncommon. In Japan it is not a rare practice to intentionally break and permanently retain needles with risk of needle migration and organ damage. Pneumothorax was rare, occurring only twice in nearly a quarter of a million treatments, it is estimated that a pneumothorax would be expected to occur once in every 41 years

of full time practice. Cases of bilateral pneumothoraces including bilateral tension pneumothoraces have been reported.⁴ Other serious events such as spinal cord injury, hepatitis B, fatal bacteraemia, delayed cardiac tamponade, haemothorax, and pseudoaneurysm seem to be uncommon in standard practice performed by adequately trained acupuncturists.

We feel that this case shows the potential serious adverse events associated with acupuncture and must be thought of in patients receiving such therapy.

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