

Highlights from the issue

Steve Goodacre, *Deputy editor*

doi:10.1136/emered-2014-203637

Out-of-hospital advanced airway management – more harm than good?

The value of out-of-hospital advanced airway management in major trauma often engenders heated debate. Wang and colleagues provide some data to enlighten (or maybe inflame) this debate. In a secondary analysis of trial data from patients with severe traumatic brain injury or haemorrhagic shock they showed that out-of-hospital advanced airway management was associated with increased 28-day mortality in those with shock and poorer 6-month neurological outcome in those with brain injury. The decision to undertake out-of-hospital advanced airway management was not randomised and so clearly subject to confounding by indication, i.e. the more critically ill patients were more likely to require airway management. Analysis involved adjustment for a number of well-recognised measures of injury severity. Is this sufficient to account for confounding by indication? Let the debate commence! Or if we are really ambitious – let the randomised trial commence!

High-dose methylprednisolone for acute cervical spinal cord injury

The use of methylprednisolone for acute spinal cord injury seems to have gone in and out of fashion in a way that is not entirely explained by the emerging evidence base. There is clearly a trade-off between potential neurological improvement and increased risk of complications. Chikuda and colleagues evaluated the latter in their observational study of 3508 patients with cervical spinal cord injury, which showed increased complications (odds ratio 1.66; 95% CI 1.23 to 2.24) in patients given high-dose methylprednisolone group but no significant difference in in-hospital mortality. Observational studies, being less selective than randomised trials, can provide more generalizable estimates of the risk of complications in the relevant population, but are potentially subject to confounding by indication (see above). It would be easy to ask for a definitive randomised trial but very

difficult, if not impossible, to provide it. Perhaps we just have to weigh up the risks and benefits with the data we have?

The greater the sedation, the greater the risk

Relocating a hip prosthesis obviously requires sedation and an increasing number of emergency physicians are willing to provide sedation without anaesthetic assistance. Dawson and colleagues looked at data from 348 patients receiving sedation for relocation of a hip prosthesis and found no association between American Society of Anesthesiologists (ASA) grade and the risk of complication. The only factor associated with an increased risk of complications was the depth of sedation. Debates often rage about the appropriate choice of agent but this factor was not associated with risk of complication. So perhaps it is not what you give that matters but how much? Or maybe we need randomised data to resolve the issue?

Blame the weather

For a country with a relatively mild climate, the British seem to spend an inordinate amount of time discussing the weather. It has been blamed for both poor economic performance and poor sporting performance in recent years. In this issue Thornes *et al* show that extremes of heat and cold were associated with increased ambulance call-outs and prolonged ambulance response times in Birmingham, the second largest city in the UK. Further work is required to determine whether these risks can be predicted in advance with the assistance of a reliable weather forecast. International readers may be interested to note what the British consider to be “extreme weather”.

Carbon monoxide poisoning and myocardial injury

The impact of carbon monoxide poisoning is primarily considered in terms of neurological injury, but in this issue Yong Sung Cha and colleagues focus on myocardial injury. They identified myocardial injury in 20% of poisoned patients and

found that injury was associated with male sex, reduced Glasgow Coma Scale and exposure time exceeding two hours. Myocardial injury was associated with a longer hospital and intensive care stay, and a non-significant increase in mortality.

Copeptin in acute coronary syndrome

The *EMJ* has reported the progress of a number of cardiac biomarkers. Ischaemia-modified albumin has fallen by the wayside and the jury is still out on heart-type fatty acid binding protein, but what about copeptin? Sanchez and colleagues showed that copeptin levels at presentation to the emergency department predicted the risk of death over the subsequent month in patients with chest pain and non-ST elevation acute coronary syndrome. However, troponin also predicted outcome and when troponin and baseline features were taken into account in the analysis the association between copeptin and outcome was no longer evident. So copeptin doesn't seem to add further prognostic information.

Randomised trials in emergency medicine

Anyone who has attempted to undertake a randomised controlled trial in emergency medicine will know what a huge challenge it involves. Services pressures, regulatory requirements, doctors unwilling to acknowledge uncertainty and patients in acute pain or distress all conspire to make recruitment a daunting task. Researchers at hospitals in Turkey therefore deserve our admiration and respect for successfully completing two randomised trials published in this issue. The trial led by Cenker Eken showed that intravenous paracetamol, dexametopfen and morphine produced similar analgesic responses in patients with acute mechanical low back pain, while the trial led by Ibrahim Turkcuer showed that intravenous paracetamol and dexametopfen produced similar responses in patients with an acute migraine attack. More randomised data are needed, but our colleagues in Turkey are leading the way.