

Letters to the Editor

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Prehospital thoracostomy

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We read with interest the article on prehospital thoracostomy published in the journal [1] and the correspondence that followed recently [2,3]. We work on the unit where the intervention was originally described [4]. In the last 10 years 1079 thoracostomies have been performed on prehospital patients in our system. This amounts to 9% of trauma patients attended in the same period. We are aware that the technique has been adopted by a number of other prehospital services, but the experience of Massarutti *et al.* is a rare publication on the subject. We would like to add to the discussion with the following points:

Prehospital thoracostomy is often discussed and criticized as a novel procedure. In fact it is merely insertion of a tube thoracostomy performed in two stages – the formation of a thoracostomy in a positively pressure ventilated patient in the prehospital phase, followed by insertion of a chest tube after arrival at the hospital. We have serious concerns about the effectiveness of the only alternative, needle decompression, in this patient group. The site, size and creation of the thoracostomy are virtually identical to the technique commonly used for chest tube insertion in hospital.

The indications for prehospital chest decompression may vary slightly between systems but will usually be a combination of patient compromise and clinical evidence of pneumothorax. We also routinely perform bilateral thoracostomy on patients with traumatic cardiac arrest. Chest decompression is not a new concept and provided the indications for drainage are unchanged it is difficult to see any ethical dilemmas.

Our rate of thoracostomy has declined slightly since the introduction of routine prehospital chest ultrasound. This technique may reliably demonstrate the absence of pneumothorax.

We hope that in the near future follow-up of the procedure will be published, particularly with respect to infection rates and other surgical complications. We

suspect that most complications will result from performing the technique incorrectly rather than disadvantages of the technique itself. We believe that this technique is an effective intervention in severely injured patients, and simplifies treatment in the prehospital phase while keeping scene times to a minimum.

References

- 1 Massarutti D, Trillo G, Berlot G, Tomasini A, Bacer B, D'Orlando L, *et al.* Simple thoracostomy in prehospital trauma management is safe and effective: a 2-year experience by helicopter emergency medical crews. *Eur J Emerg Med* 2006; **13**:276–280.
- 2 Massarutti D. Letter to the editor. *Eur J Emerg Med* 2007; **14**:234–235.
- 3 Di Bartolomeo S, De Blasio E, Gordini G, Michelutto V, Moroni C, Nardi G, *et al.* Arguable life support. *Eur J Emerg Med* 2007; **14**:233.
- 4 Deakin CD, Davies G, Wilson A. Simple thoracostomy avoids chest drain insertion in prehospital trauma. *J Trauma* 1995; **39**:373–374.

Atlantoaxial rotatory subluxation

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In the June issue, Maile and Slongo [1] briefly discussed incidence, imaging modalities, importance of recognizing and therapy of atlantoaxial rotatory subluxation. We agree with the importance of early recognition of the possibility of such a subluxation, but would like to discuss the therapeutic options.

In young patients with an acute onset of a painful 'torticollis' after a fall, abrupt movement of the cervical spine or even minor trauma, an atlantoaxial rotatory subluxation should be suspected. The incidence of such lesions is low; the estimated frequency is approximately 200 cases per year in the United States [2]. They clinically present in a 'cock-robin' posture, with the head rotated in one direction and tilted in the opposite direction. The patient can increase the deformity, but cannot correct it. Children and young adults are especially vulnerable to such injuries owing to unique anatomic differences from adults. A slim neck is more prone to the disorder as long slender necks permit a greater degree of flexion. Evidence from MRI suggests that alar ligament disruption is the mechanism by which