Letter

The outcomes of severe sepsis and septic shock in the UK

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We read with considerable interest the recent article by Ho and coworkers [1]. We welcome the attention that this brings to the emergency department (ED) management of septic patients and congratulate them on their aggressive management approach in the absence of a formal protocol for goal-directed therapy.

There is now good evidence to show that protocols such as that described by Rivers and coworkers [2] can reliably be implemented in clinical practice [3-5], although their results in terms of mortality benefit are yet to be reproduced.

We, like the authors, have recently carried out an activity analysis of patients admitted through the ED in an attempt to quantify the size of the problem in a large UK teaching hospital. We identified patients who presented to the ED at Derriford Hospital, Plymouth who were afforded an 'infectious' diagnosis over a 12-month period from August 2004 to July 2005. Patients who would have fulfilled the criteria for goal-directed therapy were identified by review of ED databases, stored blood gas databases, review of local ICNARC (Intensive Care National Audit & Research Centre) data and by hand searching of notes.

Of a total of 83,324 ED attendances 2224 had an infective diagnosis attributed to them, and of these 75 patients had a final diagnosis of severe sepsis or septic shock, of whom 32 (43%) died. Of the 75 patients, 38 (51%) were admitted to the intensive care unit (ICU), and the remaining 37 (49%) were admitted directly to the acute medical ward. Of the 37 patients who went to the medical ward, 21 (57%) subsequently deteriorated and were transferred to the ICU. Of the 16 patients who remained on the acute medical ward, eight survived to discharge and eight died. Of the 59 patients who spent some time in the ICU, 24 (32%) died. Only 22% of eligible patients had a central line inserted to guide fluid resuscitation and in only 7% was vasopressor therapy commenced in the ED.

These results are in contrast to those highlighted by Ho and coworkers [1], who reported more widespread invasive monitoring and use of vasopressors, in the absence of a formal protocol for goal-directed therapy. We feel that this highlights the need for individual departments to review the suitability of such programmes in the light of the population they serve. However, we would advocate a more aggressive approach to the management of septic patients with resuscitation based on correction of physiological parameters, under the guise of goal-directed therapy or otherwise.

Competing interests

The authors declare that they have no competing interests.

References

1. Ho BCH, Bellomo R, McGain F, Jones D, Naka T, Wan L, Braitberg G*:* **The incidence and outcome of septic shock patients in the absence of early-goal directed therapy.** *Crit Care* 2006, **10:**R80.
2. Rivers E, Nguyen B, Havstad S, Ressler J, Muzzin A, Knoblich B, Peterson E, Tomlanovich M; Early Goal-Directed Therapy Collaborative Group*:* **Early goal-directed therapy in the treatment of severe sepsis and septic shock.** *N Engl J Med* 2001, **345:** 1368-1377.
3. Cho T, Daugharthy J, Klein W, Wittlake WA: **Early goal-directed therapy, corticosteroid and recombinant activated protein C for the treatment of severe sepsis and septic shock in the emergency department.** *Acad Emerg Med* 2006, **13:**109-113.
4. Shapiro NI, Howell MD, Talmor D, Lahey D, Ngo L, Buras J, Wolfe RE, Weiss JW, Lisbon A*:* **Implementation and outcomes of the Multiple Urgent Sepsis Therapies (MUST) protocol.** *Crit Care Med* 2006, **34:**1025-1032.
5. Trzeciak S, Dellinger RP, Abate NL, Cowan RM, Stauss M, Kilgannon JH, Zanotti S, Parrillo JE: **Translating research to clinical practice: A 1-year experience with implementing early goal-directed therapy for septic shock in the emergency department.** *Chest* 2006, **129:**225-233.