PostScript

LETTERS

Effects of altitude on endotracheal tube cuff pressures

In regard to the article by Mann *et al.*,¹ the issue of endotracheal tube (ETT) cuff inflation in response to reduced barometric pressure at altitude has been recognised for a long time. The most recent study published in 2004 used pressure transducers to examine the effects in vivo.² The pressure effects of altitude on cuff volume are predicted by Boyle's law, which states that a fixed mass of gas will expand as ambient pressure decreases. If there is no method of venting this expansion, there will be an increase in pressure within any air filled space. Accordingly a number of authorities recommend the use of saline (incompressible) rather than air in ETT cuffs for aeromedical transport of intubated patients.^{3,4} This avoids the problems of gas expansion and contraction in response to changes in barometric pressure and/or the use of a relatively complex formula for deflation on ascent and re-inflation on descent.

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REFERENCES

- 1 Mann C, Parkinson N, Bleetman A. Endotracheal tube and laryngeal mask airway cuff volume changes with altitude: a rule of thumb for aeromedical transport. *Emerg Med J* 2007;24:165-7.
- 2 Henning J, Sharley P, Young R. Pressures within air-filled tracheal cuffs at altitude – an in vivo study. *Anaesthesia* 2004;59:252-4.
- 3 Shirley P. Transportation of the critically ill and injured patient. *Update in Anaesthesia* 2004;18:(article 2).
- 4 Ogle J, Ross H. Aerospace medicine. <http://www.emedicine.com> (accessed 2006).

Clinical signs of dehydration in children

The recent Best Evidence topic report article by Fayomi¹ clearly illustrates the dangers of too narrow a focus when practising evidence based medicine. Firstly, the search strategy is too narrow, as three papers²⁻⁴ which have studied this have been missed. All of these papers found tissue turgor time to be closely associated with the presence of dehydration, while the paper cited by Gorelick *et al.*⁵ found this sign to be very specific, but of low sensitivity.

Secondly, the focus of the question is too narrow. A number of studies, including Gorelick *et al.*⁵ has revealed that combinations of clinical findings traditionally associated with dehydration greatly enhanced accuracy, sensitivity and specificity.⁴⁻⁸ Accuracy, sensitivity and specificity figures of over 80% have been published, with combinations of clinical signs.⁵

In addition, some of these papers have demonstrated improvements in clinical care of the dehydrated patients with the use of scoring systems for dehydration based on combinations of clinical signs.

Many of the clinical signs of dehydration individually have high specificity, but low sensitivity. Combinations of signs are more accurate, especially when used by experienced clinicians, and are probably more accurate for lower levels of dehydration than classically taught.⁴⁻⁸ There is a tendency therefore to overestimate the level of dehydration, and this can lead to over treatment. However, there is an absence of any useful proven prospective diagnostic tools, and clinical examination is therefore still an acceptable method for determining treatment.

The usefulness of the Best Evidence topic reports have been debated in the correspondence section of this journal on previous occasions; like all medical literature, interpretation and implementation should be considered with caution, especially with regard to a wider, more strategic aspect.

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REFERENCES

- 1 Fayomi O. Is skin turgor reliable as a means of assessing hydration status in children? *Emerg Med J* 2007;24:124-5.
- 2 Laron Z. Skin turgor as a quantitative index of dehydration in children. *Pediatrics* 1957;19:816-22.
- 3 Mackenzie A, Barnes G, Shann F. Clinical signs of dehydration in children. *Lancet* 1989;2:605-7.
- 4 Duggan C, Refat M, Hashem M, *et al.* How valid are the clinical signs of dehydration in infants? *J Pediatr Gastroenterol Nutr* 1996;22:56-61.
- 5 Gorelick MH, Shaw KN, Murphy KO. Validity and reliability of clinical signs in the diagnosis of dehydration in children. *Pediatrics* 1997;99:e6.
- 6 Vega RM, Avner JR. A prospective study of the usefulness of clinical and laboratory parameters for predicting percentage of dehydration in children. *Pediatr Emerg Care* 1997;13:179-19.
- 7 Santosham M, Brown KH, Sack BB. Oral rehydration therapy and dietary therapy for acute childhood diarrhoea. *Pediatr Rev* 1987;8:273-8.
- 8 Fortin J, Parent MA. Dehydration scoring system for infants. *Trop Pediatr Environ Child Health* 1978;24:110-14.

Debriefing

In the article by Doy *et al.*¹ reference is made to "critical incident stress debriefing". It was suggested there was some disagreement as to its effectiveness, but nevertheless the article appeared to be recommending its use. I would, however, refer readers to the National Institute for Health and Clinical Excellence guidelines on post-traumatic stress disorder (www.nice.org.uk). These guidelines state that for individuals who have experienced a traumatic event, the systematic provision to that individual alone of

brief, single session interventions (often referred to as debriefing) which focus on the traumatic incident should (not their bold type) be routine practice when delivering services.

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REFERENCE

- 1 Doy R, Blowers EJ, Sutton E. 16 mental health. *Emerg Med J* 2006;23:304-12.

CORRECTIONS

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In the short report, Airway scope management versus Macintosh laryngoscope: a manikin study (*Emerg Med J* 2007;24:357-358), figure 1C is incorrect. Please find the correct figure 1C below. The journal apologises for this error.

doi: 10.1136/emj.2006.044677corr1

In the May issue the paper by Bailey *et al.* (*Emerg Med J* 2007;24:348-352) has cited the author of references 7, 13 and 18 incorrectly. The correct spelling for this authors surname is Fatovich.

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Following the notification of several errors of the paper by Lockey and Porter (*Emerg Med J* 2007;24:437-438) the article has been corrected and is printed below. The online pdf has also been replaced. The journal apologises for these errors.