

Correspondence

Sedation and agitation in the critically ill patient

We are writing in response to the editorial of Dr. J. A. Botha in *Critical Care and Resuscitation* 2003;5:167-168. The crux of Dr. Botha's argument is that efforts to objectively quantify patient agitation and using that data to guide sedation management may be misplaced as exemplified by over-reliance on Swan-Ganz catheter data. It was far from the intent of the article to suggest complete reliance on such data while ignoring clinical outcomes. The point was to focus on the opportunities such data offers for new insight and treatment. The examples of flaws in measuring agitation are obvious and easily corrected, such as high frequency seizure motion being mistaken for low frequency agitated motion, but, more importantly, are part of the process of developing new knowledge.

Dr. Botha directly states that intensivists often vacillate in managing sedation and there are no definite protocols. Certainly, better data is required to fill this gap, and once more consistent and effective protocols are developed would these protocols not be paramount to automation of the process leaving valuable clinician time for more difficult patients? This approach would allow all intensivists to act as "compassionate clinicians when treating the isolated and alienated critically ill patient". However, to avoid vacillating forever, research must proceed. We do not wish to remove the clinician but enhance their effectiveness and expertise by providing greater insight and objective data into managing sedation, freeing more time for the difficult patients that are so common in the critical care environment.

In any environment laden with confusing and contradictory information, more precise data and insight has never harmed the patient

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In reply

In reply to the letter by Dr. Shaw and Dr. Chase, it is heartening to note that complete reliance on such

automated data, whilst ignoring clinical outcomes, is not the intent of their special review "Rethinking sedation and agitation management in critical illness".¹ To focus on the closing sentence of their letter "In any environment laden with confusing and contradictory information, more precise data and insight has never harmed the patient", I believe that it is appropriate to look at what has been monitored in the intensive care unit to date. Monitoring has focused on physiological parameters and these data have been interpreted with the hope that in the appropriate clinical context, management strategies may be initiated that will improve patient outcomes. The Swan-Ganz controversy has already been alluded to but the same applies to the more recently touted PICCO monitor where measurements of intra-thoracic blood volume and extravascular lung water have not improved patient outcomes. New expensive ventilators with graphics displaying flow volume loops have not been shown to decrease ventilator time and the data on gastric tonometry are also not convincing.

It is difficult to be enthusiastic about the collecting of additional data, which will be reflecting not only physiological changes but possibly emotional distress when measurements of physiology alone are of debatable benefit. The intensivist is indeed "laden with confusing and contradictory information". Possibly the time has come for the pendulum to again swing to a more conservative approach where the focus is on frequent meticulous physical examination. This approach may well alleviate agitation and facilitate sedation. Dr. Shaw and Dr. Chase need to be commended on their novel bioengineering strategy.

This is indeed "new knowledge" but relevance of this knowledge to the critically ill, agitated patient remains debatable. "Do no harm" should continue as an integral philosophy of our practice. I am not convinced that "more precise data and insight has never harmed the patient", particularly when referring to the research tool and monitoring technique under discussion.

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REFERENCE

1. Rethinking sedation and agitation management in critical illness. *Critical Care and Resuscitation* 2003;5:198-206.

The 1952-1953 Danish epidemic of poliomyelitis and Bjørn Ibsen

The author regrets that at the time the 'Occasional Essay'¹ went to print he was unaware of the admirable paper by Severinghaus, Astrup and Murray JF,² with its account of the Danish epidemic and the consequences arising from it. There are many places in the essay where this paper should have been cited. Further, awareness of it would have indicated that - notwithstanding the earlier papers by HCA Lassen himself^{3,4} and the 1994 one from Ger Wackers⁵ - the correct 1952 day in quoting Bjørn Ibsen's demonstration was August 26, not the August 27 date as was originally printed in my essay.¹ Confirmation of that comes from Poul Astrup himself, one of the paper's authors and an original attender on that day. The full paper certainly warrants reading, also for its engaging and concise history of the respiratory gases. It is readily provided by Google™ to a request for just *Severinghaus volume 157 S114-S122*.

In the middle section of their historical paper² (that part entitled "Intensive Care Medicine") the authors describe the launching of our specialty at the Blegdam Hospital as "like the goddess Venus, it emerged fully grown and ready for action"! Among many things, they detail great lessons learned at Copenhagen of;

- a) the newly developed team approach by experts,
- b) the separate facility for trained personnel and special equipment, and
- c) a clinical laboratory for essential monitoring.

Interestingly, the authors lament the reduced availability of rapid analysis of pO₂, pCO₂ and pH in many locations since regulatory agencies decreed that only licensed technicians could operate automated blood gas analysers. So they predict increased use of transcutaneous pCO₂ electrodes, supplementing that of frequent pulse oximetry so well established by 1998.

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2. Severinghaus JW, Astrup PB, Murray JF. Blood gas analysis and critical care medicine. *Am J Resp Crit Care Med* 1998;157:S114-122.
3. Lassen HCA. The management of respiratory and bulbar paralysis in poliomyelitis. In: World Health Organization Monograph Series No. 26: Poliomyelitis Geneva: WHO. 1955:p158. (http://whqlibdoc.who.int/monograph/WHO_MONO_26.pdf)
4. Astrup P, Severinghaus J. The history of blood-gases, acids and bases. Copenhagen: Munksgaard, Radiometer. 1986:p.258.
5. Wackers GL. Modern anaesthesiological principles for bulbar polio: manual IPPR in the 1952 polio-epidemic in Copenhagen. *Acta Anaesthesiol Scand* 1994;38:420-431 (see p. 426).

Equivalence trials and the treatment of fungal infections: correction

We wish to correct an error in our paper "Moran JL, Solomon PJ. The interpretation of lack of evidence of a difference in efficacy: equivalence trials and the treatment of fungal infections. *Critical Care and Resuscitation* 5 (3):216-223, 2003. On page 220, the point estimate for the ITT treatment effect, fluconazole versus amphotericin, is given as -0.82%. This should be -8.2%. The 95% CI are correct at -16.7% to 0.4%, as is the p value at 0.06.

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