

Letter to the Editor,

Hypotension after Etomidate Use in Sepsis

To the Editor:

I congratulate Kim et al. for their study that tries to clarify an important issue (1). Etomidate has been used for decades, and its safety has been hotly debated recently (2-7). Etomidate has many qualities as a sedative for intubation: it does not promote respiratory or cardiovascular depression, and it does not increase intracranial pressure. It is a good option for neurological patients and has a predictable dose-response. All these virtues make it an important alternative for sedation when a procedure is needed, mainly in acutely ill patients that frequently are in unstable conditions. Nevertheless, the drug has been criticized, sometimes in a passionate way (8), due to its blockade in steroids synthesis. Although it's unquestionable that etomidate promotes adrenal suppression that is detectable even with single bolus use (9), the relevance of this laboratorial phenomena is far from elucidated. The clinical impact, if there is one, of this suppression (that can last 24 to 48 hr when the drug is used for intubation), is unknown. This is the fairest statement that can be made at this moment. Conceivably, many practitioners reserve the drug to the most unstable patients, and this fact may introduce a bias in retrospective studies. Only randomized, prospective trials will give us the answers that are urgently needed.

Etomidate is blamed for adrenal suppression, which can lately induce hypotension or even refractory shock, if untreated. Curiously, it induces less immediate post-intubation hypotension. This is the etomidate paradox.

REFERENCES

1. Kim TY, Rhee JE, Kim KS, Cha WC, Suh GJ, Jung SK. *Etomidate should be used carefully for emergent endotracheal intubation in patients with septic shock. J Korean Med Sci* 2008; 23: 988-91.
2. Hildreth AN, Mejia VA, Maxwell RA, Smith PW, Dart BW, Barker DE. *Adrenal suppression following a single dose of etomidate for rapid sequence induction: a prospective randomized study. J Trauma* 2008; 65: 573-9.
3. Tekwani KL, Watts HF, Rzechula KH, Sweis RT, Kulstad EB. *A prospective observational study of the effect of etomidate on septic patient mortality and length of stay. Acad Emerg Med* 2009; 16: 11-4.
4. Zed PJ, Mabasa VH, Slavik RS, Abu-Laban RB. *Etomidate for rapid sequence intubation in the emergency department: is adrenal suppression a concern? CJEM* 2006; 8: 347-50.
5. Walls RM, Murphy MF. *Clinical controversies: etomidate as an induction agent for endotracheal intubation in patients with sepsis: continue to use etomidate for intubation of patients with septic shock. Ann Emerg Med* 2008; 52: 13-4.
6. Sacchetti A. *Etomidate: not worth the risk in septic patients. Ann Emerg Med* 2008; 52: 14-6.
7. Jackson WL Jr. *Should we use etomidate as an induction agent for endotracheal intubation in patients with septic shock? a critical appraisal. Chest* 2005; 127: 1031-8.
8. Annane D. *ICU physicians should abandon the use of etomidate! Intensive Care Med* 2005; 31: 325-6.
9. Vinclair M, Broux C, Faure P, Brun J, Genty C, Jacquot C, Chabre O, Payen JF. *Duration of adrenal inhibition following a single dose of etomidate in critically ill patients. Intensive Care Med* 2008; 34: 714-9.

Address for correspondence

Fabio M. Andrade, M.D.
Clinical ICU of the Emergency Care Discipline, Hospital das Clínicas FMUSP, Hospital São Camilo Pompéia, R. Dr Enéas Carvalho de Aguiar 255, São Paulo, SP 05403-900, Brazil
Tel, Fax : +55-11-30816975
E-mail : fabiomand@hotmail.com

The Author Respond

Dear Sir:

Emergent airway establishment in decompensated shock patients does not need to be meticulously covered, and one cannot overlook etomidate's effectiveness as a RSI promoting sedative.

There is controversy surrounding whether or not etomidate has any adverse effect on mortality, however recent evidence seems to suggest that it can act as a possible risk factor for adrenal insufficiency in patients with severe sepsis.

Therefore, until there is further evidence to the contrary, we believe that although the use of etomidate should not be prohibited, we should consider the risk of adrenal insufficiency, consider preparing steroid replacements.

Also, we totally agree with the opinion that the well-designed randomized controlled study will be mandatory.

Address for correspondence

Sung Koo Jung, M.D.
Department of Emergency Medicine, College of Medicine, Seoul National University, 28 Yeongeon-dong, Jongno-gu, Seoul 110-799, Korea
Tel : +82-2-2072-3121, Fax : +82-2-741-7855
E-mail : acls@snu.ac.kr