

The bispectral index in a patient with carbon dioxide narcosis.

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摘要

Abstract

Hypercapnia may produce alterations in the level of consciousness (1). We would like to report the bispectral index (BIS) reading on a patient with CO₂ narcosis which was caused by accidental injection of muscle relaxant instead of preoperative antibiotics.

A 45-year-old female with adenomyosis uteri was scheduled for laparoscopic myomectomy. She was healthy without any systemic disease. Upon arrival in the operating room standard anaesthesia monitoring was established. When the circulating nurse administered preoperative antibiotics (cefazolin 1 gm in 10 ml IV), the patient complained of pain at the injection site and suddenly became unresponsive with cessation of breathing. Manual ventilation with 100% oxygen via a facemask was performed, initially with poor mask fit. Except for tachycardia and hypertension, the oxygen saturation and ECG were normal. The pupils responded sluggishly to light. A BIS monitor was attached and showed BIS values of between 35 and 40. Arterial blood gas analysis showed a pH of 6.875, [P.sub.a]C[O.sub.2] of 130 mmHg, [P.sub.a]C[O.sub.2] of 447 mmHg. The train-of-four neuromuscular block monitor demonstrated no twitch response. Realising the problem of inadvertent paralysis, the patient was given IV propofol 100 mg, then intubated. Anaesthesia was maintained with sevoflurane-oxygen and surgery proceeded without problem. Ten minutes after intubation, arterial blood gas analysis showed a pH of 7.254, [P.sub.a]C[O.sub.2] of 49 mmHg, [P.sub.a]C[O.sub.2] of 293 mmHg and BIS values remained between 40 and 55 throughout the case. By one hour after the "antibiotic" administration, her muscle strength had recovered and she was extubated at the completion of surgery. She was conscious in the post anaesthesia care unit and the remainder of her hospital stay was unremarkable. Subsequent checking confirmed that the operating room nurse inadvertently administered rocuronium instead of cefazolin.