Correspondence

Is propofol anticonvulsant or proconvulsant?

To the Editor:

Excitatory events ranging from minor involuntary movements to opisthotonos and grand mal convulsions have been reported on induction of anaesthesia with propofol, but appear to be more common during recovery.¹⁻³ In many, combinations of drugs were administered, making the incrimination of propofol difficult.

Our patient was a 25-yr-old man, with no epileptic history, for bilateral ligation of spermatic veins under epidural anaesthesia (500 mg lidocaine over 90 min). The patient was sedated with an infusion of propofol at a rate of 3 mg·kg⁻¹·hr⁻¹. Following surgery, propofol was discontinued. Five minutes later, the patient developed tonic-clonic convulsions that recurred intermittently for four hours, despite 15 mg diazepam, 500 mg thiopentone and 1000 mg diphenylhydantoin. Electrolytes, blood sugar, CT scan, and ECG were normal.

The convulsions might have been secondary to lidocaine-induced systemic toxicity,⁴ which were masked intraoperatively by an anticonvulsant action of propofol. Propofol has even been previously used for management of drug-induced myoclonus,⁵ and for control of status epilepticus.⁶ However, the occurrence of withdrawal syndrome after propofol infusion that culminates in grand mal convulsions has been reported.⁷ Excitatory CNS events such as myoclonus and opisthotonos have been reported in non-epileptic patients on induction of propofol anaesthesia, but appear to be more common during recovery.^{2,7,8} Previous reports have also shown that propofol can activate epileptogenic foci in epileptic patients.^{9,10}

Propofol may exert dose-dependent anticonvulsant and proconvulsant actions. High concentrations depress both the cortex and subcortex acting as anticonvulsant: low concentrations may act as proconvulsant by inhibiting the inhibitory subcortex, resulting in "release" of neuronal hyperexcitability in the cerebral cortex.^{10,11}

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Regional block cart is the way to go

To the Editor:

Administration of peripheral nerve blocks are perceived to cause delays in the operating room. They can have a high failure rate if surgery is started without allowing for latency of onset. In an attempt to circumvent these problems we developed a mobile regional block cart (Figure) which allows us to perform regional blocks prior to the patient's arrival in the operating room, in a calm environment that allows sufficient time for the block to take effect.