

METHOHEXITONE AVAILABLE AGAIN?

At the last ECT Training Day, several anaesthetists said that Methohexitone as Methohexital was available again, but in quite restricted supply.

The article below is from the US based Association of Convulsive Therapists Newsletter. The guidance seems very similar to what we published in the Psychiatric Bulletin last year.

METHOHEXITAL IN SHORT SUPPLY BUT IS INDUCTION AGENT OF CHOICE FOR ECT Extracted from ACT Newsletter, November 2002

The current shortage of methohexital (Brevital) has created major inconveniences nationwide. Methohexital has been the most widely used induction agent for general anesthesia in ECT and is considered the 'gold standard' against which all other anesthetics are compared.

Propofol/Etomidate

Alternatives to methohexital are propofol (Diprivan) and etomidate (Amidate). Each IV induction agent has been compared with the other in several studies, and each has specific advantages and disadvantages.

Propofol (1.0 to 2.0 mg/kg) has a rapid onset similar to methohexital but with a shorter duration of action. Etomidate (0.15 to .2 mg/kg) produces a longer seizure duration with slower awakening than does either propofol or methohexital, whereas propofol has the greatest effect on shortening seizure duration.

Comparative studies examining the antidepressant efficacy of ECT with the use of either methohexital or propofol have found no significant differences among patients, nor was improvement related to cumulative seizure duration. Because the postictal effects of ECT outlast all of these agents, cognitive recovery after ECT is likely to be related to seizure duration rather than choice of hypnotic.

Additional considerations regarding selection of an induction agent are hemodynamic suppression, airway reactivity, patient satisfaction, and cost. Propofol has been shown to be superior to methohexital in suppressing the hemodynamic response to ECT and in its beneficial effects on suppressing airway reactivity.

Etomidate has minimal myocardial depressant properties and may be a safer choice for patients with severe cardiac disease. Venous pain and transient skeletal muscle movements (myoclonus) have been observed in 20-39% of patients after the IV administration of etomidate.

Many studies have documented the reduced incidence of PONV (postoperative nausea and vomiting) with the use of propofol in surgical patients. We are not aware of studies reporting these effects in the ECT population.

Thiopental/Thiamylal

Compared with methohexital (0.5-1.0 mg/kg), both thiopental (1.5-2.5 mg/kg) and thiamylal (1.5-2.5 mg/kg) shorten the EEG seizure duration. The frequency of sinus

bradycardia and premature ventricular contractions was also increased with thiopental and thiamylal compared with methohexital.

Compared with propofol, the middle cerebral artery flow velocities immediately after ECT were significantly higher with thiopental, and suppression of ECT-induced hemodynamic changes with thiopental was comparable to that with sevoflurane anesthesia.

Therefore, there is no obvious reason to use either thiopental or thiamylal for ECT procedures.

Methohexital, although currently unavailable, remains the least expensive choice of the three hypnotic drugs.

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References

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