

Automated anesthesia

Automated [anesthesia](#) systems that continuously monitor [cortical excitability](#) (CE) changes to govern drug infusion rates, are desirable. Paired-pulse transcranial magnetic stimulation (ppTMS), with electromyography (EMG), provides noninvasive CE measures. We tested whether, and with what temporal resolution, ppTMS-EMG detects dose-dependent CE in rats anesthetized with continuous intravenous propofol. Motor-evoked potentials (MEPs) were recorded every 20 seconds as either propofol bolus or change in infusion rate was applied. ppTMS-derived measures varied in direct proportion to propofol dose with subminute temporal resolution. We conclude that ppTMS-EMG enables real-time markers of target engagement by anesthetics that may be incorporated into an automated device ¹⁾.

Unclassified

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