

10-2010

A Case Of Awareness During Electroconvulsive Therapy Under General Anesthesia

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Recommended Citation

D'Souza S, Shulman M, Marshansky A. A Case Of Awareness During Electroconvulsive Therapy Under General Anesthesia. ASA Annual Meeting, October 2010.

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INTRODUCTION

Electroconvulsive therapy (ECT) is an established effective short term treatment for major depressive disorder with rapid improvement in symptoms in the majority of the patients treated.¹ The true incidence of awareness during ECT under general anesthesia is not known as there are no studies reported, but probably is very low. There are three case reports of awareness during general anesthesia in recent years, two of which with recall and one without recall.^{2,3,4} We report a case of awareness with recall from our institution.

CASE DESCRIPTION

A 20 year old man presented for his tenth electroconvulsive treatment. For his previous nine treatments, he was induced with methohexital 100 mg IV and succinylcholine 80 mg was given soon after the loss of verbal contact. He also received 30 mg of propofol after the conclusion of the seizure to prevent emergence agitation. Following the ninth treatment he reported awareness and expressed his displeasure. He was assured sympathetically and his methohexital dose was increased to 150 mgs. He received 1 mg of midazolam IV after the conclusion of the seizure. He did not report awareness during this and subsequent treatments.

DISCUSSION

Possible causes for awareness during general anesthesia for ECT are wide variability of pharmacokinetics among patients, alteration of pharmacokinetics with the use of concurrent medications, development of tolerance, administration of succinylcholine without verifying loss of consciousness, ECT physician taking an extended amount of time to apply leads and to administer stimulus after induction, and repetition of stimulus multiple times in the same setting without administering additional anesthetic agent. Unilateral ECT has memory sparing effect compared to bilateral ECT and may be associated with higher incidence of awareness⁵. Keeping verbal contact at induction, administering succinylcholine when the patient is asleep, the use of an arterial tourniquet to isolate the limb, and checking verbal response with that limb are some measures to reduce awareness.

CONCLUSION

Our patient, despite eight previous ECT treatments without awareness, using the same technique the ninth treatment resulted in awareness with recall. Therefore, one should maintain vigilance.

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