

[GA2-56] Case report: paradoxical midazolam reaction causing transient expressive aphasia reversed by flumazenil in a pediatric patient

Drobish J, DiPuppo P, Cook-Sather S
Children's Hospital of Philadelphia , Philadelphia , PA, United states

Emergence agitation is a common cause of postoperative distress in the pediatric population, and presents a challenging problem for PACU staff. It is important to attempt to identify the etiology of emergence agitation because the choice of pharmacological treatment can be tailored to treat the specific cause. While both emergence agitation and paradoxical reactions to midazolam have been well described, a link between these phenomena has not been extensively discussed. We present a twelve year old Caucasian female who exhibited postoperative dysphoria, agitation, and an inability to answer questions after a thirteen minute outpatient surgery. Midazolam had been given preoperatively and was suspected to be a possible cause of the patient's behavior. Flumazenil was given with immediate resolution of symptoms, uncovering an unequivocal expressive aphasia. The patient remembered the entire episode and described being aware of her surroundings and parents but was anxious and distraught due to her inability to speak. We suggest that paradoxical reactions to midazolam represent a subset of emergence agitation, and that flumazenil can be used to effectively treat these cases. Transient expressive aphasia may, in fact, be a common problem with the offset of midazolam following anesthesia, but potentially obscured by the drug's amnesic properties, and very difficult to detect in younger, less articulate children.

Golparvar M, Saghaei M, Sajedi P, Razavi SS. Paradoxical reaction following intravenous midazolam premedication in pediatric patients – a randomized placebo controlled trial of ketamine for rapid tranquilization. *Pediatr Anesth* 2004; 14:924-30

Massanari M, Novitsky J, Reinstein LJ. Paradoxical reactions in children associated with midazolam use during endoscopy. *Clin Pediatr* 1997; 36:681-4

Roelofse JA, Stegmann DH, Hartshorne J, Joubert JJ. Paradoxical reactions to rectal midazolam as premedication in children. *Int J Oral Maxillofac Surg* 1990; 19:2-6

Saltik IN, Ozan H. Role of flumazenil for paradoxical reaction to midazolam during endoscopic procedures in children. *Am J Gastroenterol* 2000; 10:3011-2

Sanders JC. Flumazenil reverses a paradoxical reaction to intravenous midazolam in a child with uneventful prior exposure to midazolam. *Paediatr Anaesth* 2003;13:369-70

Sikich N, Lerman J. Development and psychometric evaluation of the pediatric anesthesia emergence delirium scale. *Anesthesiology* 2004; 100:1138-45

Voepel-Lewis T, Mitchell A, Malviya S. Delayed postoperative agitation in a child after preoperative midazolam. *J Perianesth Nurs* 2007; 5:303-8
