

A case of propofol dependence after repeated use for endoscopy

A 27-year-old man with a history of diazepam and midazolam abuse was admitted to the Department of Psychiatry at Seoul National Hospital with propofol (2,6-diisopropylphenol) dependence as a result of repeated endoscopic procedures with propofol sedation. After first receiving propofol for endoscopy at the age of 24, the patient began visiting endoscopists with growing frequency with the sole aim of receiving propofol. He underwent endoscopy once a week in June 2007. In December 2007, he visited seven clinics over a ten-day period. In July 2008, he underwent endoscopy for 15 consecutive days. The patient's propofol abuse continued until he was admitted to the closed psychiatric wards. He has since been hospitalized seven times for propofol dependence. The increased seeking behavior that led to the patient's uncontrollable desire for propofol is a common pattern in substance dependence.

Propofol is a widely used sedative hypnotic agent that exerts ultrarapid activation of special central γ -aminobutyric acid A receptors [1]. Over 456 000 patients have received propofol sedation for endoscopy worldwide [2]. A recent US study showed that 25.7% of endoscopic procedures involving sedation utilized propofol in 2006, compared with just 3.1% in 1989 [3]. Propofol may indeed be an effective sedative with relatively short recovery

times, but its therapeutic window is narrow. Since the introduction of propofol in the mid 1980s, 11 reports of propofol abuse and dependence have surfaced in the medical literature [1,4]. Although the addictive properties of propofol have yet to be proven, case reports suggest a link to dependence and abuse. Most warnings regarding propofol use, however, focus on cardiopulmonary complications [5].

This is the first report documenting the case of a patient repeatedly submitting to endoscopy solely to receive propofol. It highlights the risks in administering propofol to patients prone to drug abuse. Gastroenterologists should note that propofol dependence may develop in patients requesting sedation for repeated endoscopic procedures.

Endoscopy_UCTN_Code_CPL_1AN_2AB

Competing interests: None

S. Roh¹, J. M. Park², D. J. Kim³

¹ Department of Mental Health Research, Seoul National Hospital, Seoul, Korea

² Department of Gastroenterology, Seoul St. Mary's Hospital, The Catholic University of Korea, Seoul, Korea

³ Department of Psychiatry, Seoul St. Mary's Hospital, The Catholic University of Korea, Seoul, Korea

References

- 1 Bonnet U, Harkener J, Scherbaum N. A case report of propofol dependence in a physician. *J Psychoactive Drugs* 2008; 40: 215–217
- 2 Deenadayalu VP, Eid EF, Goff JS et al. Non-anesthesiologist administered propofol sedation for endoscopic procedures: a worldwide safety review [abstract]. *Gastrointest Endosc* 2008; 67: 107
- 3 Cohen LB, Wechsler JS, Gaetano JN et al. Endoscopic sedation in the United States: results from a nationwide survey. *Am J Gastroenterol* 2006; 101: 967–974
- 4 Roussin A, Montastruc J-L, Lapeyre-Mestre M. Pharmacological and clinical evidences on the potential for abuse and dependence of propofol: a review of the literature. *Fundam Clin Pharmacol* 2007; 21: 459–466
- 5 Rex DK, Deenadayalu VP, Eid E et al. Endoscopist-directed administration of propofol: a worldwide safety experience. *Gastroenterology* 2009; 137: 1229–1237

Bibliography

DOI 10.1055/s-0030-1256602

Endoscopy 2011; 43: E362

© Georg Thieme Verlag KG Stuttgart · New York · ISSN 0013-726X

Corresponding author

D. J. Kim, MD, PhD

Department of Psychiatry
Seoul St Mary's Hospital
The Catholic University of Korea
505 Banpo-dong
Seocho-gu
Seoul 137-701
Korea
Fax: +82-2-5943870
kdj922@chol.com