

Letters to the Editor

Cystitis associated with chronic ketamine abuse

doi:10.1111/j.1440-1819.2009.01972.x

KETAMINE HYDROCHLORIDE, an *N*-methyl-D-aspartic acid (NMDA) receptor antagonist, is increasingly used as a recreational drug.¹ Ketamine abusers have anecdotally reported the suffering from cystitis while using this substance. Herein we present the case of two subjects who abused ketamine, who had severe urinary tract symptoms. Informed consent was obtained from both subjects.

The first subject was a 24-year-old woman who had been snorting powdered ketamine for 2 years. By the time of her admission for depressive disorder and ketamine dependence, she described a rapid increase of ketamine use up to 2 g/day in 6 months, and that during this period severe dysuria, urinary frequency and urgency developed. She had visited several gynecologists and urologists, but a series of examinations, including urinalysis, urine culture, pelvic examination and hysteroscopy, were all negative and interstitial cystitis was diagnosed. The symptoms subsided significantly, however, within 2 weeks of discontinuation of ketamine in the restricted environment of the psychiatric ward.

The second patient, a 26-year-old man, has abused ketamine for 6 years and denied other substance use. Self-reportedly, he used ketamine up to 6 g/day by either snorting or smoking in the last 2 years. For the past 6 months he had visited urologists frequently due to dysuria and urinary frequency but there were no abnormal findings. He was admitted to a psychiatric ward under advice for the management of ketamine abstinence. On the first day of admission he went to the toilet nearly every 5 minutes. All laboratory data were within normal range. The symptoms of cystitis were improved, although not completely resolved, after 1 week.

Although the concept of ketamine dependence is generally accepted and has been described at World Health Organization drug conferences, the chronic effects of high-dose ketamine have not been well delineated in psychiatry. Both of the present cases demonstrated strong temporal association between ketamine use and cystitis. In addition to antagonism on NMDA receptor, ketamine also has some opiate receptor activity and profoundly inhibits muscarinic signaling.² Hence, repeated high-dose ketamine use may lead to cholinergic dysregulation and urinary tract symptoms. The ulcerative cystitis, described as a new clinical entity due to chronic ketamine use, was suggested to be caused by the toxicity of ketamine and its active metabolite on the bladder mucosa.³ Furthermore, one case report indicated a dose-related effect of ketamine on the bladder,⁴ a finding that may explain the limited symptom resolution in the second case, in which a higher dose of ketamine was involved. Taken together, as ketamine-associated cystitis has become increasingly noted,⁵ psychiatrists need to be alert to these potential long-term sequelae when managing patients with ketamine dependence.

REFERENCES

- 1 Yen CF, Hsu SY, Cheng CP. Polysubstance use and its correlates in adolescent ecstasy users in Taiwan. *Addict. Behav.* 2007; 32: 2286–2291.
- 2 Durieux ME. Inhibition by ketamine of muscarinic acetylcholine receptor function. *Anesth. Analg.* 1995; 81: 57–62.
- 3 Shahani R, Streutker C, Dickson B, Stewart RJ. Ketamine-associated ulcerative cystitis: A new clinical entity. *Urology* 2007; 69: 810–812.
- 4 Grégoire MC, MacLellan DL, Finley GA. A pediatric case of ketamine-associated cystitis. *Urology* 2008; 71: 1232–1233.
- 5 Chu PS, Kwok SC, Lam KM *et al.* 'Street ketamine'-associated bladder dysfunction: A report of ten cases. *Hong Kong Med. J.* 2007; 13: 311–313.

Lian-Yu Chen, MD¹, Kun-Po Chen, MD, MSC¹ and Ming-Chyi Huang, MD^{1,2}

¹Department of Psychiatry, Taipei City Psychiatric Center, Taipei City Hospital and

²School of Medicine, Taipei Medical University, Taipei, Taiwan
Email: mch@tpech.gov.tw

Received 26 September 2008; revised 14 February 2009; accepted 19 February 2009.

Musical obsession: Repeated auditory imagery of a cell phone ring tone

doi:10.1111/j.1440-1819.2009.01986.x

MUSICAL OBSESSIONS (the repetition of songs in the head) have only sporadically been reported as single cases or very small case series in the literature.^{1–4} Whereas previous reports focused on music per se, the present report is different in that it involves a more limited obsessional phrase: a cell phone ring tone.

The patient, a 22-year-old college student, had been diagnosed with obsessive–compulsive disorder (OCD; DSM-IV) at age 19 years. His symptoms included counting, checking, and cleaning compulsions. The patient went into almost complete remission on 3–4 months of fluoxetine (40 mg/day). He stopped medication after a further month and remained reasonably well until his index presentation, at which time he reported a 4-month history of a preoccupation with cell phone ring tones.

He had been using a cell phone regularly during the previous 5 years and was excessively fond of downloading and changing cell phone ring tones, sometimes as often as every 2–3 days; this was a hobby rather than a symptom of OCD because, although the behavior occupied 2–3 h per day, he enjoyed what he was doing, and there was no disturbance in social and academic activities.

At the index presentation, however, he complained that he had begun to experience cell phone ring tones running repeatedly through his mind. The phenomena were intrusive and anxiety-provoking; he attempted to cope by keeping his cell phone in the silent mode, by asking others to follow suit, by