

## A PILOT STUDY OF URINARY SYMPTOMS IN EX-KETAMINE USERS

### Hypothesis / aims of study

The recreational use of ketamine was first reported in 1971 in North America while it gained the popularity in Hong Kong (HK) since 1980s. Much concern has been put in the acute effect during active ketamine usage, while the long term effect in ex-users is unclear. This study aims to look at the effect of ketamine on the urinary symptoms of ketamine ex-users.

### Study design, materials and methods

All patients presented with urinary symptoms and with history of ketamine abuse are assessed in a urogynecology clinic. Detail history concerning the urinary symptoms and pattern of previous ketamine used and a 3-day bladder diary are recorded and analysed.

### Results

From Nov 2009 onward, a total of 15 patients were assessed. Their mean age was 19.1 (SD 3.0) years old. The mean age of first use of ketamine was at 15.1 (2.4) years old and with 39.7(31.5) months use of ketamine. They have stopped using ketamine for 6.7(3.2) months (range 1-12 months).

Among them, all had urinary symptoms. Five (33%) of them complained of urinary urgency, 3 (20%) urge incontinence, 3 (20%) stress incontinence, 5 (33%) had history of recurrent episodes (> 3 times) of urinary tract infection in last one year. And 5 (33%) of them presented with more than one of the above symptoms.

From the bladder diary, 7 (46.7%) of them had voided more than 7 times in daytime (range 7-20 times) while 4 (26.7%) of them had nocturia 2 or more times per night. The mean maximum capacity of them is 190ml (range 40-300 ml).

All of their mid stream urine culture showed no active urinary tract infection at the time of consultation. All of them have normal serum renal function.

### Interpretation of results

The associated urinary symptoms in active ketamine have been demonstrated in previous case reports (1, 2). This study demonstrated the persistent urinary symptoms even in ex-users who had stopped ketamine for up to 12 months. There was high prevalence of urinary symptoms; which include urinary frequency, nocturia, urinary urgency, urge incontinence and stress incontinence. The knowledge on this association may help further exploration of the pathophysiology of ketamine on urinary system and advocate on the early cessation of ketamine use.

### Concluding message

Ketamine abuse is associated with significant urinary symptoms not just in active users but also after they stopped its use. These symptoms can persist in ex-users even 12 months after cessation of its use. Further studies are needed to establish the relationship between the duration and dosage of ketamine use and the persistent symptoms.

### References

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2. Chu PSK, Ma WK, Wong SCW, Chu PWH, Cheng CH, Wong S, Tse JML, La FL, Yiu MK, Man CW. The destruction of the lower urinary tract by ketamine abuse: a new syndrome? BJU Int. 2008; 102: 1178-9.

<b>Specify source of funding or grant</b>	<b>NONE</b>
<b>Is this a clinical trial?</b>	<b>No</b>
<b>What were the subjects in the study?</b>	<b>HUMAN</b>
<b>Was this study approved by an ethics committee?</b>	<b>Yes</b>
<b>Specify Name of Ethics Committee</b>	<b>Joint The Chinese University of Hong Kong - New Territories East Cluster Clinical Research Ethics Committee</b>
<b>Was the Declaration of Helsinki followed?</b>	<b>Yes</b>
<b>Was informed consent obtained from the patients?</b>	<b>Yes</b>