

## Image Article

## Chronic Ketamine Abuse Associated with Renal Carbuncles

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A 38-year-old woman was presented to the emergency department with complaint of dysuria, suprapubic pain and flank pain. She had a history chronic ketamine abuser. On physical examination, the patient had lower abdominal tenderness and bilateral flank knocking pain. The rest of physical examination were unremarkable. The patient underwent abdominal Computed Tomography (CT) scan without contrast material due to renal insufficiency. CT scan showed features of bilateral pyelonephritis with multiple hypodense nodular masses with foci of reduced attenuation compatible with renal carbuncles in both kidneys (Figures 1 and 2, arrows). A diagnosis of bilateral renal carbuncles was made. The patient was started on intravenous fluids, parenteral antibiotics, and continuous urinary drainage through a Foley. On the following days, urine and blood cultures yielded *Escherichia coli*. She recovered with conservative management 10 days later.

Renal carbuncles are usually a complication of untreated pyelonephritis. The diagnosis may be clinically suspected as symptoms of fever and chills, flank pain or the signs of sepsis are present. Unenhanced CT is useful in detecting the inflammatory lesions. Ketamine is an N-methyl-D-aspartate receptor antagonist medication mainly used for anesthesia, chronic pain, sedation, depression and bipolar disorder [1]. Ketamine is also used as a recreational drug for its hallucinogenic and dissociative effects. Urinary tract abnormalities are the most commonly reported chronic toxic effect related to ketamine abuse [2]. Cessation of ketamine use may improve most symptoms of lower urinary tract symptoms with proper treatment [3]. Early diagnosis of renal carbuncle and antibiotic therapy are essential for a good clinical outcome.



**Figure 1:** Axial view of patient's abdominopelvic computed tomography.



**Figure 2:** Coronal view of patient's abdominopelvic computed tomography.

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## Authors' contributions

All authors passed four criteria for authorship contribution based on recommendations of the Internal Committee of Medical Journal Editors.

## References

1. Grady SE, Marsh TA, Tenhouse A, Klein K (2017) Ketamine for the treatment of major depressive disorder and bipolar depression: A review of the literature. *Ment Health Clin* 7: 16-23.
2. Yiu-Cheung C (2012) Acute and chronic toxicity pattern in ketamine abusers in Hong Kong. *J Med Toxicol* 8: 267-270.
3. Hanna J (2010) KLUTS: Ketamine and Lower Urinary Tract Symptoms. *Erowid Extracts* 19: 12-14.