

Dear Doctor or Health Professional

**Re: Association of Ketamine with Unexplained Bladder and Abdominal Symptoms**

We would like to draw your attention to increased recreational use of ketamine in B&NES. Ketamine use can present a serious risk of damage to bladder, urinary tract and kidneys. The drug's use is most prevalent among younger people, who may be seeking help from GPs without actively disclosing their ketamine use.

**Patient profile to look out for:** If you have a patient who fits the following profile, we strongly recommend you ask the client directly whether they have ever used ketamine:

1. Any male with symptoms of cystitis.
2. Females with symptoms of cystitis, unresponsive to antibiotics or with negative microbiology.
3. Males or females with unexplained abdominal pains.

These symptoms can be severe enough to require hospitalisation with potential progression to irreversible bladder and renal damage. Cases of bladder carcinoma associated with ketamine use have been identified in the Bristol area in 2010 and 2011. Although commoner among those who use ketamine daily or at high doses, damage can also occur with low dose recreational ketamine use.

**Recommended management is primarily preventative:**

1. *Establish a link:* Aim to establish a clinical link between the symptoms and use of ketamine – most ketamine users are well aware of this link, so do ask them.
2. *Provide client with information about causes and outcomes:* Explain to the patient the cause of the symptoms (inflammation and ulceration of the bladder), and that if ketamine use continues, it can result in irreversible bladder damage with chronic supra-pubic pain and chronic urinary symptoms (which may require long-term catheterisation or surgical interventions such as removal of the bladder or formation of a new bladder). If urinary symptoms are severe, refer to Mr John McFarlane at the Urology Department at Royal United Hospital services for further advice or investigation.

Other risks from with ketamine use include vulnerability associated with loss of self awareness and control. Chronic use among males is also linked to erectile dysfunction.

3. *Harm reduction and pain management:* Encouraging the patient to reduce or ideally stop their ketamine use is important. Cystitis-like symptoms will usually resolve if the patient stops using the drug. The patient should be aware that the healing process can take many months. Patients with severe urinary tract symptoms may be reliant on ketamine itself as an analgesic to control the associated pain, so cutting down ketamine use may only be realistic if there is *good alternative pain control*. For mild pain an NSAID and paracetamol is recommended (also consider nefopam). For

moderate pain buprenorphine patches can be used (if opioids required, use modified release preparations) – such as morphine patches.

4. *Seek further help from others regarding treatment strategy and support for your patient:* For further support, please encourage them to seek advice from Project 28 (for those aged 18 and under) – or from Developing Health and Independence (DHI), which is the single point of entry for adult drug services in Bath. Chronic ketamine use often results in anxiety and depression which can get worse during a detox. Success in stopping will depend on active management of these symptoms plus a substantial amount of psychotherapeutic support.

**Ketamine is associated with the following physical problems:**

- i Cystitis like symptoms are caused by ulceration of the bladder. This may progress to chronic problems with a shrunken inflamed bladder and suprapubic pain, dysuria and haematuria, as well as urgency, frequency and incontinence. Ketamine and at least one of its metabolites appears to be toxic to the epithelial lining of the urinary tract system.
- ii The renal and urinary systems may become obstructed with a gelatinous precipitate, which is probably sloughed epithelium. This may progress to a narrowed or scarred urethra with subsequent renal problems.
- iii The biliary tree may also become obstructed and dilated (which has been associated with a raised ALT or Alk Phos on liver function). This may be the cause of the severe abdominal pains, well known to ketamine users as ‘K Cramps’. These symptoms often occur prior to the development of urinary tract symptoms.

If there are any signs or symptoms of the above evident then referral to the Urology Department at Royal United Hospital is recommended.

Most users snort ketamine, but occasionally Ketamine may be injected (I/M or I/V), in the belief that they will be able to use less, get a better hit and avoid some of the adverse effects. All the usual safer injecting advice should be given, plus advice that injecting is unlikely to avoid urinary tract symptoms or K cramps.

If you are concerned about a patient regarding ketamine dependency then please contact DHI or Project 28. If you are concerned about bladder or urinary tract symptoms advice may also be sought at DHI or a direct GP referral made to the Urology Department. Please see contact details below.

DHI Beehive Beehive Yard Walcot Street BATH BA1 5BD Tel. 01225 329 411	The Recovery Hub High Street Midsomer Norton BA3 2DP Tel. 01761 417 519	Project 28 28 Southgate Street BATH BA1 1TP Tel. 01225 463 344	Department of Urology Royal United Hospital Combe Park Bath BA1 3NG Tel. 01225 825 990
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