CASE REPORT

Urinary retention secondary to mephedrone

Nerys Conway, David McGowan, Daniel White, Suzanne Phillips

Acute Medicine,
Gloucestershire Royal Hospital,
Gloucester, UK

Correspondence to

Dr Nerys Conway,
nerys.conway@doctors.org.uk

SUMMARY

We discuss a case of a 25-year-old man who presented to the acute medical take with a mixed overdose of mephedrone and paracetamol. Sixteen hours after ingestion, he reported that he was unable to micturate. A bladder scan confirmed that he was in urinary retention and he was catheterised. We discuss the increasingly popular recreational drug mephedrone including its more common side effects.

BACKGROUND

This case clarifies the importance of side effects of recreational drugs that may occur in healthy individuals. A case of urinary retention secondary to mephedrone has not been reported.

CASE PRESENTATION

A 25-year-old man with a history of depression was admitted after deliberating ingesting 35 × 500 mg of paracetamol and approximately 3–4 g of mephedrone. He presented to our emergency department approximately 8 h after ingestion.

INVESTIGATIONS

His, admitting, blood results demonstrated a blood haemoglobin concentration of 16.3 g/dl, a prothrombin time of 15 s, a creatine of 85 mol/l, alanine transaminase (ALT) of 49 IU/l and a bilirubin of 20 mg/dl. His ECG was unremarkable.

TREATMENT

He was started on *N*-acetyl-cysteine. His blood tests were repeated 9 h after admission (15 h after ingestion). His prothrombin time had increased to 19 s and his ALT had increased to 90 IU/l. He was discussed with the hepatic team at our local tertiary centre with regard to his abnormal clotting and rising ALT. He was prescribed 10 mg of vitamin K and observed on the acute medical unit.

Approximately 16 h after ingestion he started complaining of abdominal pain and stated that he had not passed urine in several hours. A bladder scan confirmed the presence of a total of 653 ml of residual urine and he was subsequently catheterised.

OUTCOME AND FOLLOW-UP

His catheter was removed 24 h later, following which he was able to pass urine without any further problems and was discharged home.

DISCUSSION

Mephedrone (also named methedrone) is also known as 4-methylephedrone (4-MMC) or 4-methylephedrone. Street names include meow-meow, maximum available control technology and bubble. Mephedrone is a semisynthetic drug derived from cathinone, the stimulant in Khat. The effects of mephedrone are reported to be both stimulant and hallucinogenic.¹

There have been increasing reports and media coverage in relation to its use. It was classified in April 2010 (under the Misuse of Drugs Act 1971) as a class B drug. Its use is common among young people and easy to obtain. A study in Tayside, Scotland stated that of 1006 individuals questioned approximately 205 (20.3%) reported usage of mephedrone.² It is considered a cheaper alternative to other recreational drugs.³

The most common route for recreational use include oral ingestion and insufflation.³ The effects of sniffing mephedrone were reported to occur after approximately 10–20 min, but if swallowed the effects occurred 20–40 min later.¹

The most common clinical features include agitation, tachycardia, dilated pupils, dry mouth, rapid eye movements and systolic hypertension.^{1 4 5} A study in London reported agitation was the most common clinical feature seen in approximately 53.3%. Others included tachycardia in 40%, systolic hypertension in 20% and seizures in 20%.⁴ Another study in Edinburgh and Falkirk, which predominantly focused on the psychiatric side effects, stated that agitation was present in approximately 70%.⁵ However, it is important to appreciate that in both studies alcohol is a contributing factor towards agitation experienced. For example, the latter study concluded that 60% were intoxicated by alcohol.

In summary, mephedrone is a recreational drug commonly used among young people in the UK. The most common clinical feature is agitation. There have been no cases reporting urinary retention as a result of mephedrone ingestion. Mephedrone toxicity is commonly seen in our emergency and acute medical departments. Patients need to be observed on an appropriate unit and discussed with the local toxicology centre when appropriate.

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Learning points

- ▶ With new recreational drugs, the side-effect profile is incompletely known; meaning acute physicians should be hypervigilant for newly developing symptoms in an otherwise healthy patient.
- ▶ The growing level of recreational use of 'legal highs' and newly classified illegal substances results in doctors undertaking regular re-education in the pharmacodynamics, pharmacokinetics and side effects of these medications to allow for these patients to be properly and safely treated.
- ▶ With agitation being the most common effect of mephedrone ingestion, this common presenting complaint should always have 'recreational drugs' as a differential diagnosis.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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