



URINE DRUG SCREENING AS A USEFUL TOOL IN CLINICAL PSYCHIATRY: TWO CASE EXAMPLES

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ABSTRACT Urine drug screening has far reaching implications for clinical practice and common reasons for urine drug screening include random testing at the workplace, military testing, athletics, legal and criminal situations and medical emergencies like unconscious patients and cause of death. Here we present two cases where urine drug screening in the emergency medicine set up helped us to detect cases of substance where otherwise the diagnosis would have been missed.

KEYWORDS :

INTRODUCTION

Urine drug screening has far reaching implications for clinical practice [1]. Some of the common reasons for urine drug screening include random testing at the workplace, military testing, athletics, legal and criminal situations and medical emergencies like unconscious patients and cause of death [2]. It may also be done when substance use is suspected in violent patients that present as psychosis and delirium and when no antecedent cause of psychosis is found. It is also useful in routine screening of patients with substance abuse when the aim is to check abstinence [3]. Urine is most often the preferred test substance due to ease of collection and the concentrations of drugs and metabolites also tend to be high in the urine, allowing longer detection times than concentrations in the serum allow [4]. The following case report discusses two cases where urine drug screening in the emergency medicine set up helped us to detect cases of substance where otherwise the diagnosis would have been missed.

CASE 1 – Barbiturate toxicity presenting as psychosis

An 18 year old boy was brought to the emergency medicine department by his mother with chief complaints of altered behaviour since the past 15 days in the form of angry abusive behaviour and wandering away from home. The mother noticed him muttering to self and showing gesticulating behaviour. She was not able to give a detailed history as she used to go out to work and the son would be alone at home. She mentioned that the boy had a history of inhalant abuse and cannabis use but was not sure of last consumption details and quantity of abuse or use currently.

Three days prior to presentation, the patient was found missing from his house and was out of his house the whole night. The next morning he came back home with Foley's catheter in situ and bleeding from the ear (which may have been done at a hospital). He was found muttering to self, not talking much, lost in thoughts, not responding to verbal commands and not answering to questions asked. He was dishevelled too. There was no previous history of any psychiatric complaints in him, also no family history of any psychiatric complaints.

In view of his history of substance use, we decided to do urine kit test for poly substance. On this test Barbiturate came out to be positive [Figure 1]. Thus we diagnosed him as Barbiturate poisoning and referred to emergency department for further management. For symptomatic control of his psychotic behaviour we advised tablet Olanzapine 5mg twice a day. He improved once the effect of barbiturate weaned off. The patient unfortunately did not follow up with us so detailed history could not be revealed. We wish to emphasise the usefulness of the multidrug urine kit in such cases of acute confusional states or psychosis where no proper history is available.

Figure 1 – Barbiturate positive in urine in the drug kit



CASE 2 – Benzodiazepine toxicity misdiagnosed as Conversion Disorder

A 34 year old unmarried female educated till the 10th standard educated, working as a nurse in private hospital was brought to the emergency medicine department by her mother and brother with complaints of not responding to verbal commands; not eating and drinking and unable to maintain posture since the morning of the day they brought her to us. The patient was apparently alright 2 days prior to presentation when her pet cat was admitted to a veterinary hospital for food poisoning. Next day she came to know that cat died due to illness after hospital management informed her on phone when she was at workplace. After she returned home, her family members and neighbors noticed change in her behavior in form of decreased interaction with family members, not taking interest in surrounding activities, not eating food and remaining aloof.

Next morning she did not come out of house for water collection as usual and that is when family members and neighbors found her unresponsive to verbal and painful stimuli. They tried to waken her but in vain. The family members brought her to emergency medicine department of our hospital from where she was referred to psychiatry suspecting conversion disorder.

On examination patient was found drowsy, responding only to painful stimuli, having some mumbled speech and not able to sit on her own on the chair. There were multiple scratch marks on both the upper limbs which family members claimed were of the pet cat which died. There was no past history of any psychiatry illness or self harm behavior. The family members denied any chances of drug or substance overdose. In past medical history, she had Tuberculosis 7 years back for which she took proper treatment and also had undergone laparotomy for intestinal obstruction 4 years ago. There was a family history of

alcohol consumption in father and death of father due to its complications. As we suspected some kind of poisoning we requested the family members to allow us to do urine test for various substances (Family members were not at all accepting that patient had consumed some poison). Multidrug urine test was done with urine kit which turned positive for benzodiazepines [Figure 2]. The patient was admitted to the medicine ward and treated for benzodiazepine toxicity following which a psychiatric assessment was carried out. On follow-up after 2 days, she was well oriented and able to talk properly and agreed to consumption of 40 tablets of Paracetamol (generally available at her house) and 8-10 tablets of alprazolam (which her grandmother used to take for treatment for insomnia). Her intension was to die as she was having repeated thoughts about her pet cat being suffered.

On further investigation by urine toxic screen A and B: Urine Benzodiazepine was 5321 ng/ml (cut off being 200). Thus we present the usefulness of urine drug test kit in emergency situations wherein diagnosis is not sure and no proper history is available. A patient would have been misdiagnosed as conversion disorder and the benzodiazepine poisoning would have been missed.

Figure 2 – Benzodiazepine positive on the urine kit



DISCUSSION

Urine drug screens are valuable tools in health care and in the emergency medicine department. Correct interpretation of the validity and reliability of these tools is critical for making decisions that will ultimately have social and legal implications [5]. A detailed medication history, including prescription, nonprescription, and herbal medications, and proper knowledge of medications that cross-react with UDSs are essential [6]. Clinicians need to use the kit regularly and routinely in clinical practice to help them diagnose substance induced psychiatric disorders or toxicity especially when the patient denies the same and no corroborative history is available.

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