Can medical students identify recreational drugs by name?

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Summary

Background: Recreational drug toxicity is a common reason for presentation to the Emergency Department. Knowledge of recreational drug names is important to allow targeted assessment of patients presenting with recreational drug toxicity.

Aims: To assess final year medical student knowledge of proper and street names for recreational drugs.

Design: Questionnaire survey of final year medical students attending a revision lecture.

Methods: There were two questionnaires used in this study. The first contained either proper names of recreational drugs or names sounding similar to recreational drugs or licensed pharmaceutical products; students were asked to identify which of these were recreational drugs. The second contained street names of recreational drugs and the students were asked to identify which recreational drug the street name referred to.

Results: One hundred and thirty-five students completed the questionnaire 1. The mean total score (±SD) of correct answers was 7.15 ± 2.26 (range 2–13) out of a maximum of 15. One hundred and fifteen students completed questionnaire 2. The mean total score (±SD) of correctly identified street names was 11.0 ± 2.6 (range 0–17) out of a maximum of 24. No individual student was able to correctly identify all the street names for the recreational drugs listed in the survey.

Conclusions: We have shown that final year medical students have variable knowledge of both the proper and street names of recreational drugs. There is a need for improved education of medical students in the names of recreational drugs and the sources of information available to assist them in identifying what drugs an individual has taken.

Introduction

Recreational drug use in the developed world, including the UK and USA is common and is increasing.¹⁻⁴ Toxicity related to use of recreational drugs is most common in those aged 16–45 years, and the most common agents involved are cocaine, amphetamines, 3,4-methylenedioxy-N-methylamphetamine (MDMA) (‘Ecstasy’), ketamine and gamma-hydroxybutyrate (GHB).³⁻⁶ These presentations can result in significant morbidity (e.g. agitation, dysrhythmias, drowsiness/coma with airway compromise and seizures), although the overall mortality from recreational drug toxicity is low.⁵

UK medical schools often have little focused teaching relating to clinical toxicology, specifically on the presenting features and management of acute toxicity from recreational drugs. The effect of this...
lack of focused teaching was demonstrated in a survey of 210 final year medical students’ perception of their knowledge on management of commonly seen acute medical emergencies. Management of ‘drug overdose’ was the acute medical emergency where they felt that they lacked the knowledge on management.

Patients presenting to the Emergency Department with toxicity following the use of recreational drugs often use a combination of both proper and street names for the drug or drugs that they have used. It is therefore important that clinicians are aware of both ‘proper’ and ‘street’ names of recreational drugs that patients may use, so that they can undertake a targeted assessment to identify and prevent potential complications. There are no data available on UK medical students’ knowledge of either ‘street’ or ‘proper’ names of recreational drugs.

Methods

Study population

Final year medical students attending a revision lecture at an inner city UK medical school were surveyed anonymously by questionnaire. In addition to the specific study data detailed below, basic demographic data (student’s age and gender) were also collected.

‘Proper names’ of recreational drugs

Students were given a list of 15 ‘drug names’ and asked to state whether each was a recreational drug. The list consisted of known recreational drugs (MDMA (‘Ecstasy’), gamma-butyrolactone (GBL), GHB, 1-benzylpiperazine (BZP), methamphetamine, ketamine, cocaine and Lysergic acid diethylamide (LSD)), names sounding similar to recreational drugs (MDMQ, GABA and LST) or licensed pharmaceutical products (ketotifen, benzocaine, methenamine and benzylbenzoate). Each name appropriately identified as a recreational drug or not scored one, maximum score 15.

‘Street names’ of recreational drugs

Students were given a list of 24 common ‘street names’ for cocaine, methamphetamine, GHB and its analogues, MDMA and ketamine. All these names were derived solely from the internet site ‘Erowid’ (http://www.erowid.org/) and are names commonly used by patients that we see clinically (MDMA—XTC, Beans, Rolls, Adam, X; GHB—G, GBH, EZ Lay, Liquid E, Blue Verve; ketamine—Special K, Cat Tranquilizer, K; methamphetamine—Glass, Tweak, Tina, Crystal, Shabu Shabu, Meth, Yaba; cocaine—Coke, Blow, Nose Candy, Snow). For each ‘street name’, they were asked to identify which of the five choices of recreational drugs it was (MDMA, GHB, ketamine, methamphetamine and cocaine). Each ‘street name’ correctly identified scored one, maximum score of 24.

Ethical approval

This survey was approved by the Head of the Final Year at the Medical School.

Results

Study group demographics

Proper names

A total of 135 students completed the questionnaire—70 (52%) of the students were male and 61 (45%) female (four did not specify gender). The mean age was 24.4 ± 2.0 years (range 22–34 years).

Street names

A total of 115 students completed the questionnaire—55 (48%) of the students were male and 57 (50%) female (three did not specify gender). The mean age was 23.8 ± 1.7 years (range 22–32 years).

Proper names

The mean total score (±SD) was 7.15 ± 2.26 (range 2–13) out of a maximum of 15. The percentage of students that thought each name listed was a recreational drug or not are shown in Figure 1. Students had a better awareness of some recreational drugs (correct identification for MDMA, cocaine, methamphetamine and LSD in 93, 93, 90 and 96%, respectively), than others (correct identification for BZP, GBL and GHB in 27, 25 and 64%, respectively).

A significant proportion of students thought that some of the names sounding similar to recreational drugs and licensed pharmaceutical products were recreational drugs (names sounding similar to recreational drugs—MDMQ (43%), GABA (34%) and LST (27%); licensed pharmaceutical products—methenamine (44%), benzocaine (42%), benzylbenzoate (33%) and ketotifen (21%)].

Street names

The mean total score (±SD) was 11.0 ± 2.6 (range 0–17) out of a maximum of 24. No individual student was able to correctly identify all the street names for recreational drugs listed in the survey. Table 1 shows the percentage of correct responses
for each recreational street drug name. No student knew all the street names for GHB, cocaine or methamphetamine and only 1 (0.9%) correctly identified all the street names for MDMA. However, 44 (38.2%) correctly identified all the street names for ketamine.

### Table 1 Percentage of correct responses for each recreational drug street name

<table>
<thead>
<tr>
<th>Recreational drug</th>
<th>Street name</th>
<th>Percentage correct (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>94.8</td>
<td></td>
</tr>
<tr>
<td>GBH</td>
<td>87.0</td>
<td></td>
</tr>
<tr>
<td>GHB</td>
<td>24.3</td>
<td></td>
</tr>
<tr>
<td>Liquid E</td>
<td>35.7</td>
<td></td>
</tr>
<tr>
<td>Blue Verve</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td>Special K</td>
<td>94.8</td>
<td></td>
</tr>
<tr>
<td>Cat Tranquilizer</td>
<td>40.9</td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>93.0</td>
<td></td>
</tr>
<tr>
<td>XTC</td>
<td>88.7</td>
<td></td>
</tr>
<tr>
<td>Beans</td>
<td>20.9</td>
<td></td>
</tr>
<tr>
<td>Rolls</td>
<td>5.2</td>
<td></td>
</tr>
<tr>
<td>Adam</td>
<td>42.6</td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>70.0</td>
<td></td>
</tr>
<tr>
<td>Coke</td>
<td>99.1</td>
<td></td>
</tr>
<tr>
<td>Blow</td>
<td>7.0</td>
<td></td>
</tr>
<tr>
<td>Nose Candy</td>
<td>55.6</td>
<td></td>
</tr>
<tr>
<td>Snow</td>
<td>18.3</td>
<td></td>
</tr>
<tr>
<td>Glass</td>
<td>4.3</td>
<td></td>
</tr>
<tr>
<td>Tweak</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td>Tina</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td>Crystal</td>
<td>86.1</td>
<td></td>
</tr>
<tr>
<td>Shabu Shabu</td>
<td>17.4</td>
<td></td>
</tr>
<tr>
<td>Meth</td>
<td>86.1</td>
<td></td>
</tr>
<tr>
<td>Yaba</td>
<td>19.1</td>
<td></td>
</tr>
</tbody>
</table>

### Discussion

This study demonstrates that amongst final year medical students knowledge of both proper and street names of recreational drugs is variable. Additionally a significant proportion incorrectly identified names sounding similar to recreational drugs or licensed pharmaceutical products as recreational drugs. Although the numbers who were unaware that cocaine and MDMA were recreational drugs was small, this is concerning given the potential clinical significance of toxicity from these commonly encountered recreational drugs.

Patients who present to hospital with recreational drug toxicity have often ingested multiple substances, including concomitant ethanol. These patients can develop significant morbidity, for example MDMA-induced hyperthermia and cocaine-related acute coronary syndrome. Since real-time toxicological screening for recreational drugs is generally not available, it is important that clinicians know the names of recreational drugs in order that they can undertake an appropriate clinical assessment and targeted management.

Many patients will use ‘street names’ for the drug or drugs that they have used, instead or in addition to proper names. It is important that clinicians should always clarify, with the patient or using other sources of information, what drug or drugs have been actually used by the patient, since ‘street names’ are variable, changing and often colloquial. This information is often easily available through user internet sites such as Erowid (www.erowid.org), which provides not only ‘proper’ names, but also commonly used ‘street’ names for recreational drugs. However, medical students and clinicians should be aware of the variable quality of information that is available through user internet sites, and the potential for mis-information. We would therefore recommend that clinicians use sites such as TOXBASE (www.toxbase.org) or the US Office of National Drug Policy Control (www.whitehouse-drugpolicy.gov/index.html).

The British Pharmacological Society in response to changes to undergraduate medical training, leading to reduced dedicated Clinical Pharmacology teaching, published a core curriculum in Clinical Pharmacology for medical students. Despite this published core curriculum, the deficiencies in undergraduate training in relation to Clinical Pharmacology and Therapeutics, particularly in relation to drug prescribing, still persist. In addition, a recent study of final year medical students has demonstrated that they had poor perception of their knowledge management of acute medical emergencies relating to

![Figure 1. Percentage of final year medical students that correctly identified the name of a recreational drug (filled square), or that a name sounding similar to a recreational drug (square with horizontal lines)/a licensed pharmaceutical product (square with cross lines) was not a recreational drug.](image-url)
'drug overdose', compared with other medical emergencies commonly encountered, such as myocardial infarction, asthma and pneumonia. Awareness of clinical toxicology amongst medical students, physicians and allied health professionals increases with structured attachments to regional poisons centres. In addition, previous studies have shown that physicians' knowledge on management issues in clinical toxicology improves with structured teaching by clinical toxicologists. However, in many countries this is not a feasible option, due to the limited number of poisons centres and clinical toxicologists available to deliver specialist placements and teaching.

It is essential that these deficiencies in medical students training relating to clinical toxicology, and in particular recreational drugs are addressed through more structured teaching and training throughout their undergraduate training. This teaching and training should include both the proper and common locally encountered ‘street’ names of recreational drugs, and a framework for managing patients with toxicity associated with use of these recreational drugs. Finally, medical students in training and qualified clinicians should be aware of the information and support that are available through regional or national poisons centres to assist them in managing patients with recreational drug toxicity.

Conflict of interest: None declared.

References