Improvement in the recognition and assessment of acute drug toxicity in the pre-hospital environment

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‘Classical Drugs’ Clinical Classification

Stimulants
- Amphetamines
- MDMA (‘ecstasy’)
- Cocaine

Depressants
- Heroin, opioids
- Benzodiazepines
- GHB

Hallucinogens
- LSD
- Psilocybin
- Ketamine
NPS Clinical Classification

**Stimulants**
- Piperazines
- Cathinones
- Synthetic cocaine
- Pipradrols
- Indanes
- Benzofurans

**Hallucinogens**
- Glaucine
- Ketamine analogues
- Tryptamines
- Synthetic cannabinoids
- Salvia ...

**Depressants**
- GBL, 1,4-BD
- Novel opioids and metabolites

Usually appropriate, some have additional or 'crossover' toxicity
Pre-hospital acute drug toxicity
Pre-hospital acute drug toxicity

Medical problems related to recreational drug use at nocturnal dance parties
Diederik K. Van Sassenbroeck, Paul A. Calle, Filip M. Rousseau, Alain G. Verstraete, Frans M. Belpaire, Koenraad G. Monsieurs, Raoul Haentjens, Jacques Allonsius, Jean Van Brantegem, Wim Haenen and Walter A. Buylaert

Hospital and prehospital emergency service utilisation as an impact of acute recreational drug and ethanol toxicity


Epidemiology of Recreational Drug Toxicity in a Nightclub Environment

David M. Wood, Michelle Nicolaou, and Paul I. Dargan

Substance Use & Misuse, 44:1495–1502
Hospital Data

No. of presentations

Amphet. | Cocaine | Ecstasy | GHB/GBL | Ketamine | Other

Club Medic Room Data

No. of presentations

Amphet. | Cocaine | Ecstasy | GHB/GBL | Ketamine | Other

Epidemiology of Recreational Drug Toxicity in a Nightclub Environment

DAVID M. WOOD, MICHELLE NICOLOU, AND PAUL I. DARGAN
Pre-hospital acute drug toxicity

- Many individuals just need reassurance in a calm environment
- But potential for severe toxicity and life-threatening clinical features
  - GHB: coma with aspiration risk
  - Sympathomimetics: hyperpyrexia, seizures, psychosis
  - Cocaine: chest pain
- 2005: delayed transit of patients to hospital
London Pre-Hospital Guidelines Project

AIM:
Early identification of those at risk: simple clinical assessment
Guidelines on when to call an ambulance

- February – August 2006
  - Guideline development: clinical toxicology, ambulance service, ED; support from police
  - Training programme for club ‘medics’
- September – October 2006
  - Implementation and audit of the referral guidelines
- December 2006 - March 2007
  - Revision & implementation of finalised guidelines
Guidelines for Referral of Recreational Drug Users to A&E

Refer to hospital if ANY one of the following are present:

1. AVPU assessment graded as either P or U
   A=Alert
   V=Responds to voice / talking to
   P= Responds to painful stimuli
   U=Unconscious

2. Chest pain similar to a 'heart attack'

3. Any history of seizures (i.e. a convulsion similar to an epileptic fit) during this episode

4. >2 'poisoned clubbers' per member of ‘club medic’

5. Temperature >38°C not settling after 15 minutes of rest OR a temperature >40°C at any time

6. HR >140 beats per minute for >15 minutes

7. Blood pressure Systolic <90 or >180, Diastolic >110 on 2 readings 5 minutes apart

8. Confusion or agitation

9. Any concerns on behalf of the medical personnel involved

Version 2: Updated May 2007 ©Guy’s & St Thomas’ Poisons Unit

Equipment

- Quiet area
- Bed or stretcher
- Thermometer
- Clock with second hand
- Sphygmomanometer
- Cold water for drinking
Guidelines for Referral of Recreational Drug Users to A&E

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   A=Alert
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6. HR >140 beats per minute for >15 minutes

7. Blood pressure Systolic <90 or >180, Diastolic >110 on 2 readings 5 minutes apart

8. Confusion or agitation

9. Any concerns on behalf of the medical personnel involved


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Adaptation to a European Context

- Different models of pre-hospital care across Europe
- EMCDDA funded project in 2011
- Internet based review of UK guidelines
  1. Guideline components
  2. Facilities needed for initial assessment / care:

PREPARATION OF CLUB / NIGHT-TIME ECONOMY SPECIFIC GUIDELINES FOR IMPROVING PRE-HOSPITAL CARE OF RECREATIONAL DRUG USERS ADAPTED TO A EUROPEAN CONTEXT

CONTRACT CODE: CC.11.SAT.020

FINAL REPORT

Authors: Wood DM, Dargan PI

17th January 2012
17 countries responded to survey
When to call an ambulance to take someone with acute recreational drug toxicity to hospital

Call an ambulance if **ANY** one of the following are present:

1. AVPU assessment graded as either P or U
   A=Alert
   V=Responds to voice i.e. talking to them
   P=Responds to painful stimuli only
      (e.g. pressure across a finger nail)
   U=Unconscious

2. Chest pain similar to a 'heart attack' (i.e. like a pressure on the chest, like a band around the chest)

3. Any history of witnessed seizures (i.e. a convulsion similar to an epileptic fit) during this episode

4. More than 2 'poisoned clubbers' per 'club medics'

5. Temperature >38°C not settling after 15 minutes of rest
   OR temperature >40°C at any time

6. HR >140 beats per minute not settling within 15 minutes

7. Blood pressure Systolic <90 or >180, Diastolic >110 on 2 readings 5-10 minutes apart

8. Breathing difficulties, such as a fast breathing rate, which do not settle within 5-10 minutes

9. Confusion, significant agitation (e.g. pacing around the room) or significant aggression not settling within 15 minutes

10. Any concerns on behalf of the medical personnel involved

**IF IN DOUBT CALL AN AMBULANCE**

Version 1: 17th January 2012

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**Appendix 4.** Revised recommendations on the minimum facilities and equipment required for assessing an individual with acute recreational drug toxicity in a night-time economy venue.

The minimum facilities and equipment recommended for assessing individuals with acute recreational drug toxicity within a night-time economy environment are:

- Quiet **air-conditioned / temperature controlled** area away from the main area of the venue which has appropriate access for emergency services
- Bed or stretcher
- Thermometer
- Sphygmomanometer (ideally an automated machine which will measure both heart rate and blood pressure)
- Watch / clock with second hand
- **Cold water for drinking**
- **Gloves**
- Telephone (preferably land-line) located within the area
European Drug Emergencies Network
Euro-DEN

- European Commission DPIP project 2013-2015
- Workstream 1 (David Wood this afternoon ...)
  - Systematic collection of data on European Emergency Room Admissions with acute recreational drug and NPS toxicity
- Workstream 2
  - Training and guidelines for staff in recreational settings to respond to drug related incidents
Euro-DEN pre-hospital training

- Development of training package
  - Interactive package for staff in recreational settings and updated referral guidelines
  - Recognition of acute drug toxicity including NPS
  - Pre-hospital assessment guidelines

- Feasibility study to deliver training
  - London, UK; Oslo, Norway; Mallorca, Spain; Brno, Czech Republic
  - Qualitative feedback

- Finalised training package and guideline
Conclusions

- Pre-hospital acute drug/NPS toxicity is common
- Data collection in pre-hospital environment
- Different patterns to hospital cases
  - Mild-moderate: reassurance, observation
  - Severe: fast-track for hospital assessment
- EMCDDA project 2011
  - UK guidelines adopted to European context
- Training of staff important
  - Awareness of drug toxicity and assessment