The Agitated Patient

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Case:

A 35 year-old man was found rolling in the street in his underwear. Police were called, and the man was handcuffed with his hands behind his back. He remained uncontrollable and his legs were tied. Paramedics were called and reported an agitated, combative man without evidence of injury who communicated only with unintelligible sounds. He was placed in the prone position for transportation. During transport he became bradycardic with subsequent asystole. Restraints were removed and resuscitation was unsuccessfully attempted.

Postmortem toxicology reported nonlethal blood levels of methamphetamine and amphetamine and were negative for other toxins including cocaine and alcohol. There was no major traumatic injury, evidence of infectious disease or other contributory cause of death.

I. Background:

- Agitated patients commonly present to the emergency department.

- The underlying etiology is typically unclear and complicates expeditions management. Potential etiologies include:
  - Trauma
  - Acute psychiatric or medical disorder
  - Alcohol or other drug intoxications
  - Withdrawal syndromes

- Excessive agitation represents a serious risk to both the patient, health care providers and medical staff.

- For all of these reasons, severely agitated patients are HIGH RISK.

- Goals of management:
  - Manage the patient’s agitation
    - Consider the best method of physical restraints
    - Consider the best method of chemical sedation given the individual clinical scenario
  - Assess for acute medical and traumatic conditions
  - Arrange for appropriate disposition
II. The syndrome of excited delirium (ExD)

- First modern mention of ExD in 1985.

- Presentation occurs with sudden onset of the following:
  - Bizarre and/or aggressive behavior
  - Shouting, paranoia, panic and violence towards others.
  - Unexpected physical strength

- Complications: Hyperthermia, rhabdomyolysis, renal failure, hyperkalemia, metabolic acidosis, coagulopathy (DIC), and sudden deterioration.

- Majority of cases precipitated by stimulant drug use. Most commonly cocaine but also methamphetamine, PCP, LSD, and even designer amines such as bath salts.

- ExD is a medical emergency. Rapid identification and treatment is critical in the management of these patients.
  - Approximately 2/3 of patients die at the scene or during transport by paramedics.

- Effective management requires rapid sedation with benzodiazepines, neuroleptics or a combination of the two or use of other agents (see below).

III. Physical Restraints:

- Physical restraints may be necessary and appropriate

- Consider the appropriate way to physically restrain patients
  - Never “hogtie” a patient or restrain in the prone position

- Recognize that physical restraints as “monotherapy” have significant risks.
  - Sudden death had occurred in physically restrained, agitated patients

- Practitioners should attempt to remove physical restraints as quickly as possible.

IV. “Chemical Restraints” – choice of medications for sedation

- The following table illustrates some common agents used for sedation of the agitated patient. We will discuss the risks and benefits of several of them.
<table>
<thead>
<tr>
<th>Agent</th>
<th>Class</th>
<th>Route</th>
<th>Typical Dose</th>
</tr>
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<tbody>
<tr>
<td>Midazolam</td>
<td>Bzd</td>
<td>IM, IV</td>
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<tr>
<td>Lorazepam</td>
<td>Bzd</td>
<td>IM, IV</td>
<td>2 mg</td>
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<td>Diazepam</td>
<td>Bzd</td>
<td>IV</td>
<td>10 mg</td>
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<tr>
<td>Haldoperidol</td>
<td>Typ antipsych</td>
<td>IM, IV</td>
<td>5 mg</td>
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<td>Typ antipsych</td>
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<td>Olanzapine</td>
<td>Atyp antipsych</td>
<td>IM</td>
<td>10 mg</td>
</tr>
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<td>Atyp antipsych</td>
<td>IM</td>
<td>20 mg</td>
</tr>
<tr>
<td>Ketamine</td>
<td>Other</td>
<td>IM, IV</td>
<td>IM 5 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>IV 1 mg/kg</td>
</tr>
</tbody>
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References: