Diagnostic Approach to the Patient With an Unknown Overdose

The ISPCC frequently gets calls regarding patients who have been found down with mental status changes and are suspected of having taken an overdose, but what the patient may have taken is unknown. The ISPCC uses a standard approach to managing patients with unknown overdoses.

**HISTORY** When the patient cannot provide a thorough or reliable history, collateral history from family or friends and scene information from the first responders may provide clues to what substances the patient might have been exposed to.

**VITAL SIGNS** Vital signs can provide important clues to which drugs, chemicals or pharmaceuticals the patient was potentially exposed to.

**Pulse & BP**
- Increased: Sympathomimetics (cocaine, methamphetamine, synthetic hallucinogens), anticholinergics
- Decreased: Beta-blockers, calcium channel blockers, cardiac glycosides

**Temp**
- Increased: Sympathomimetics, anticholinergics, salicylates, serotonin syndrome, neuroleptic malignant syndrome
- Decreased: Sedative hypnotics, ethanol, opiates, carbon monoxide

**Resp Rate**
- Increased: Acidosis, sympathomimetics, salicylates
- Decreased: Narcotics, sedative-hypnotics

**Pupil Size**
- Mydriasis: Sympathomimetics, anticholinergic
- Miosis: Narcotics, clonidine, sedative hypnotics

**LABORATORY DATA and EKG**

**Basic Metabolic Panel** Assess for acidosis, hyper or hypo-glycemia, electrolyte abnormalities and renal function.

**Other Labs** Liver enzymes (elevated in acetaminophen ingestions, etc) and coagulation studies (elevated in liver injury or after exposure to anticoagulants). A notably elevated measured serum osmolality (mOsm / kg) may help diagnosis an alcohol ingestions, but a “normal” serum osmolality cannot rule-out a toxic alcohol ingestion.

**Specific Toxicological Testing** Acetaminophen, salicylates, ethanol and other levels as dictated by the patient’s history.

**EKG**
- Wide QRS (>0.1 sec): Tricyclic antidepressants, phenothiazines, propoxyphene, diphenhydramine, cocaine, class Ia and Ic antiarrhythmics, carbamazepine.
- Prolonged QT: Antipsychotics; class Ia, Ic and III antiarrhythmics; itraconizole; citalopram; phenothiazines.

June’s Poison Hotline will address the therapeutic approach to an unknown overdose.

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