Cocaine

Cocaine is a potent stimulant that may cause life-threatening vascular disasters, hyperthermia and agitation (excited delirium)

Toxicity / Risk Assessment

Cocaine ('coke') routes: ingestion, IV, mucous membranes

Peak effect – IV: < 2 min; snorting: 15-30 min

Duration – IV: < 30 min; snorting: 1-2 hours

Ethanol interacts with cocaine forming cocaethylene - longer duration of action with similar toxicity

Toxic dose is variable but > 1 g is potentially lethal.

Naïve individuals are more susceptible to develop severe toxicity

Clinical features:

Sympathomimetic toxidrome and CNS excitation.

CNS: euphoria, agitation, aggression, seizures (as the only manifestation), **hyperthermia** (related to serious toxicity)

CVS: chest pain, hypertension, tachycardia, acute coronary syndromes, arrhythmias, QRS widening, QT prolongation

Complications:

Respiratory: Pneumothorax, pneumomediastinum

Vascular: aortic dissection, SAH, ICH, cardiomyopathy, vasospasm/thrombosis anywhere (gut or limb ischaemia)

Other: rhabdomyolysis, ARF, choreoathetosis

Management:

Immediate **attention to** life-threatening **severe hyperthermia** and CVS complications (↑BP, ↑HR, arrhythmias), as well as **rapid control of marked agitation** (excited delirium) and seizures.

Rapid titration of benzodiazepines (and rapid cooling) is the mainstay of treatment.

Diazepam 5-10 mg IV every 5-10 mins to achieve sedation; less severe cases: use oral diazepam q30 mins

Beta Blockers are relatively contraindicated as first line treatment of cardiovascular toxicity.

Hyperthermia - *treat aggressively as temperatures > 40°C can rapidly lead to death*

If T > 39°C rapid cooling; may require intubation and paralysis.

Ventricular Arrhythmias/Sodium Channel Blockade

1 mL/kg 8.4% $NaHCO_3$ solution as slow (2 minutes) IV bolus, repeat bolus doses every 5 minutes to rapidly acquire pH in 7.50-7.55 range. Resistant broad complex arrhythmias despite serum pH 7.50-7.55, use 1.5 mg/kg lidocaine as slow IV push (discuss with Clinical Toxicologist)

Hypertension - Diazepam: if refractory – IV GTN infusion; if refractory call Clinical Toxicologist

Seizures/Agitation – treat with titrated doses of IV diazepam. ***Excited delirium:*** *medical emergency requiring rapid pharmacological intervention (consider ketamine or general anaesthetic with intubation)*

Acute Coronary Syndrome/Chest pain

Treated along usual lines, **except beta blockers**; PCI is preferred over thrombolysis

SVT/AF - if not responsive to IV diazepam AND associated with cardiovascular compromise, use verapamil 1-2 mg IV q1-2 minutes to maximum of 10 mg

Decontamination: Not required unless body stuffer/packer (call Clinical Toxicologist)

Disposition: Monitor for at least 4 hours post exposure and until symptoms abate.