Dr Koutsogiannis Feb 2015; current until Feb 2017

Pharmacological Management of Acute Behavioural Disturbance in Adults for the ED

General principles

- These guidelines are generally used for the agitated/aggressive patient suffering from a mental health illness or stimulant drug toxicity and not for delirium or withdrawal states.
- The aims of acute sedation are:
  - To bring severe behavioural disturbance under control for the safety of the patient and staff
  - To allow comprehensive diagnostic assessment and management of underlying disorder
  - To sedate, not to render the patient unconscious.
- General approach to an agitated patient is to be exercised – verbal de-escalation, collaboration with the patient, respectful and non-judgmental manner, least coercive measures etc
- Oral medications are preferred method of drug administration with the parenteral route restricted to patients in whom oral agents have failed or when the level of disturbance and resistance does not allow oral administration
- The mainstay of pharmacological therapy for stimulant drug toxicity (eg 'ice') is benzodiazepines, preferably diazepam, to control agitation and the cardiovascular physiological abnormalities. The addition of an antipsychotic to control behaviour is often required for the highly aroused patient.
- The Sedation Assessment Tool (SAT) is an easy to use, validated score guiding pharmacological management.
  - SAT score of -1 is the endpoint of therapy
  - An increase of SAT score to +2 or +3 after endpoint is reached is a good predictor for the need of additional medication.
- Benztropine 2 mg IV or IM should be used to manage acute dystonic reactions caused by antipsychotics only when they occur, and not as a routine.

Evidence

Knott JC — Randomized clinical trial comparing intravenous midazolam and droperidol for sedation of the acutely agitated patient in the emergency department. *Ann Emerg Med.* 2006; 47:61-67

Chan E — Intravenous Droperidol or Olanzapine as an Adjunct to Midazolam for the Acutely Agitated Patient: A Multicenter Randomized, Double-Blind, Placebo-Controlled Clinical Trial. *Ann Emerg Med.* 2013; 61:72-81.

Isbister G — Randomized controlled trial of intramuscular droperidol versus midazolam for violence and acute behavioral disturbance: the DORM study. *Ann Emerg Med.* 2010; 56(4):392-401

GUIDELINES FOR PHARMACOLOGICAL MANAGEMENT OF ACUTE BEHAVIOURAL DISTURBANCE IN ADULTS FOR THE EMERGENCY DEPT

SAT Score +1

Mildly aroused, pacing, anxiety/agitation but still willing to engage.

ORAL

Benzodiazepine

- **Diazepam: 5 - 10 mg**
  (Repeated if necessary every 30-60 min to a max of 60-120 mg in 24 hrs)

OR

- **Lorazepam**: **1- 2 mg**
  (Repeated if necessary every 60 min to a max of 10 mg in 24 hrs)

AND/OR

Olanzapine: 5 - 10 mg
(Repeated if necessary every 2-6 hrs to a maximum of 30 mg in 24 hrs.)

SAT Score +1 to +2

Moderately aroused, agitated, becoming more vocal, unreasonable and hostile.
Distressed and fearful.

ORAL

Olanzapine 10 - 20 mg

(Repeated if necessary every 2-6 hrs up to a maximum of 30 mg in 24 hrs.)

PLUS

- **Diazepam: 10 - 20 mg**
  (Repeated doses **10 mg** every 30 min to a max of 120 mg in 24 hrs)

OR

- **Lorazepam**: **2- 4 mg**
  (Repeated if necessary every 60 min to a max of 10 mg in 24 hrs)

SAT Score +2 to +3

Moderately aroused, agitated, hostile **AND refusing oral medication**

Highly aroused & **physical aggression imminent or present**

PARENTERAL

1st Line

Droperidol IM/IV: 5 - 10 mg
(Repeated if necessary every 15 minutes to a max of 20 mg in 24 hrs (preferred option, especially for stimulant toxicity))

OR

Olanzapine IM/IV: 10 mg
(Repeated if necessary every 2 hrs to a max of 30 mg in 24 hrs)

2nd Line (or in addition to 1st line)

Diazepam IV: 5 - 10 mg
(Repeated if necessary every 10 min to a max of 60 mg (preferred option for stimulant toxicity). NB. Do NOT give IM)

OR

Midazolam: 5 - 10 IM/IV
(Repeated doses if necessary **2.5-5 mg IV or 10 mg IM** every 10 min to a max of 25 mg)

The recommendations herein are guidelines and do not substitute for clinical judgement.

For difficult to sedate patients call the Emergency Physician in charge or Toxicologist for advice on other pharmacological options.

Sedation Assessment Tool (SAT) – Aim for Score -1

Score	Responsiveness	Speech	
+3	Combative, Violent, Out of control	Continual loud outbursts	**+1** to **+3** *Agitation*
+2	Very Anxious / Agitated	Loud outbursts	
+1	Anxious / Restless	Normal / Talkative	
0	Awake / Calm	Speaks normally	**Zero**
-1	Asleep but rouses if name is called	Slurring or Slowing	**-1** to **-3** *Sedation*
-2	Responds to physical stimulation	Few recognisable words	
-3	No response to stimulation	Nil	

- **Use SAT Score at onset & repeat, with vital signs (including SpO2), post parenteral sedation every 10 min for 1st hour, then every 30 min for 2nd hour.**
- **Medically clear if HR > 60, SBP > 90, RR > 12, SpO2 > 90% (RA) & 2 hours post parenteral sedation.**
- **If received droperidol, must have an ECG prior to disposition to check for QT prolongation.**
- **Use of midazolam is more likely to produce over sedation (SAT > -1) & respiratory depression, & may preclude timely admission to Mental Health Unit.**
- **Use lower doses of both drugs when using combination therapy to avoid over sedation.**
- **Lower doses for elderly, low body weight, intoxicated, and the antipsychotic naïve**

NOTE: these guidelines are adapted from the National Drug Strategy guidelines for management of psychostimulant toxicity (2006), the Calvary Mater (Newcastle), St Vincent's (Melb), Nexus and VDDI

Additional References

Management of patients with psychostimulant toxicity: Guidelines for Emergency Departments 2006; National drug strategy

Wilson MP et al. The psychopharmacology of agitation: consensus statement of the American association for emergency psychiatry project BETA psychopharmacology workgroup. *West J Emerg Med.* 2012; 13:26-34.

St Vincent's Guidelines For Pharmacological Management of Acute Behavioural Disturbance In Acute Mental Health settings, 2014.

Calver et al. The impact of a standardised intramuscular sedation protocol for acute behavioural disturbance in the emergency department *BMC Emergency Medicine* 2010; 10(1):14

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Calver et al. A prospective study of high dose sedation for rapid tranquilisation of acute behavioural disturbance in an acute mental health unit. *BMC Psychiatry* 2013, 13:225