

Surviving Sedation Guidelines 2015 V 3.9

Mental Safety Risk	Anaesthetic RISK		
	LOW RISK: thin, fit, fasted, known easy airway	MEDIUM: ASA 2 -3, unknown fasting / airway	HIGH RISK: old, sick, obese, OSA, ASA 4+, known difficult airways
LOW: flat affect, depressed, low suicide risk, "happy drunk", thought disordered but insightful	low risk, reassurance, safe disposition plan, avoid any medications / restraint	No physical restraint, simple monotherapy and slow titration to score 0 - 1	Avoid pharmacological therapy. Reassurance and orientation. Get info from usual health carer
MEDIUM: intoxicated, disinhibited, unpredictable, poor insight, marked anxiety	If sedation required - aim for 0 - -1. Use benzo +/- antipsychotic and titrate	Aim for sedation score = 0 titrate monotherapy and have airway equipment in area	Aim for score 0 - 1 using short acting, reversible agents initially Airway equipment prepared for RSI
HIGH: known forensic hx, violent, weapons, physical threats, persecutory delusions around care, large aggressive person,	Consider "rapid take down" if situation is unsafe Prepare for RSI with traditional agents	Sedation to occur in a fully monitored and airway-ready area. Full RSI prep and plan. May delay RSI etc until initial response to 1st line agents Physical restraints useful	DIFFICULT scenario: Ketamine sedation may be best option with plan to progress to RSI if required Physical restraints until safe

Olanzapine - first line oral antipsychotic; wafer 10-20mg oral (Max Dose 30mg/24hr)

Diazepam - first line oral benzodiazepine ; 10-20mg

Haloperidol - 5-10mg IV/IM up to max 20mg/24hr

benztropine 1-2mg IV should be available to treat acute dystonia

Droperidol 10mg IMI – best second line option (Max dose 20mg/24hr)

Ketamine - PRE-KETAMINE SEDATION ESSENTIAL to MINIMISE DELIRIUM

IM 4mg/kg, IV 0.5-1.5mg/kg sedation. Ketamine infusion has been used for transport.

MINIMUM SEDATION MONITORING - SpO2, ECG, NIBP. Consider ETCO2 .

SUPPLEMENTAL OXYGEN AT ALL TIMES

Approved restraints , 45 degree head up to maximise SV and minimise aspiration risk.

CHECK BGL!

RAPID ASSESSMENT ACUTE AGITATION

Are any of the following potentially reversible causes contributing to agitation?

Abnormality of:

Airway, Breathing, Circulation, Disability - resuscitate as indicated

Drugs - are there signs of treatable toxidrome or overdose?

Environment - provide low stimulus, calm environment

Full bladder - empty

Glucose - low or high - check BSL

Head injury - urgent CT Brain, consider RSI if GCS < 8

Important:

Perform BSL and ECG on all agitated patients as soon safely possible

SUGGESTED ALGORITHM

No IV Access

1st line: Oral olanzapine wafer and/or diazepam 10-20mg (Max olanzapine dose 30mg/24hr)

2nd line: IMI droperidol/haloperidol 5-10mg (Max dose 20mg/24hr)

3rd line: IMI ketamine 4mg/kg

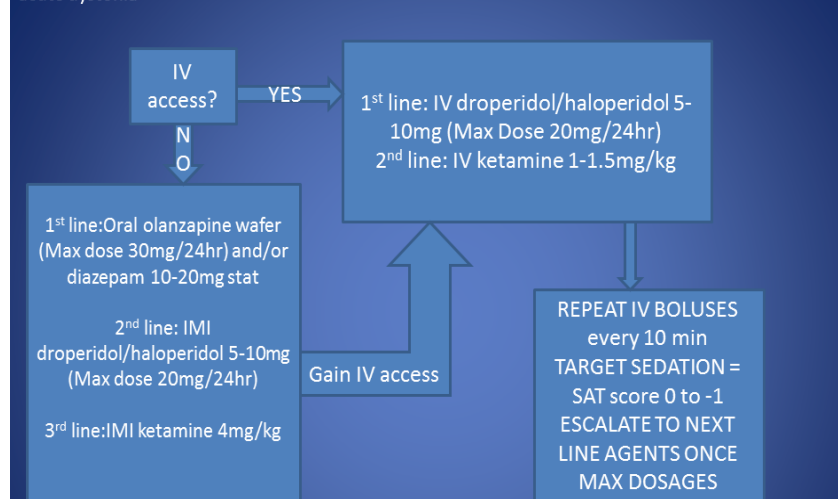
IV access obtained

1st line: IV droperidol/haloperidol 5-10mg (Max Dose 20mg/24hr)

2nd line: IV ketamine 1-1.5mg/kg

repeat every 10 mins to target SAT score 0 to -1. ESCALATE TO NEXT LINE SEDATION

Benztropine 1-2 mg IV/IMI(adult dose) should be available when giving haloperidol to treat possible acute dystonia



STAFF SAFETY IS PARAMOUNT

1. **Medical and nursing staff should not physically restrain violent patients to administer sedation without adequate security/Police presence and/or mechanical restraints.**
2. **Assessment should occur in a pre-designated "safe area" within the hospital / clinic. Ideally with 2 escape doors and a duress alarm system**

Assess situation & patient inc Airway, Anaesthesia risk VS RISK SELF&OTHERS

Patient position:

1. Supine (patient laying on back) on trolley is preferred
2. At least one staff/security member to each limb and one to administer medication (can use shackles if available)
3. **Avoid prone position** - prone restraint/sedation has been associated with cardiac arrest and death.

Monitoring - cardiac monitor/ECG, pulse oximetry, NIBP, ETCO2 where available

Sedation Assessment Tool (SAT) scoring system

score	Responsiveness	Speech
+3	combative, violent, out of control	continual loud outbursts
+2	very anxious and agitated	loud outbursts
+1	anxious/restless	normal / talkative
0	awake and calm/cooperative	normal
-1	asleep but rouses if name called	slurring or prominent slowing
-2	responds to physical stimulation	few recognisable words
-3	no response to stimulation	nil

Drugs:

Oral 1st line and safest, repeated oral dosing of a benzodiazepine and antipsychotic is advised if possible to maximum recommended doses.

Intramuscular

Sites

1. Gluteal - upper, outer quadrant
2. Lateral thigh
3. Deltoid

Intravenous

Sites

1. Mid-forearm best (cephalic vein)
2. Avoid cubital fossa *if possible* - arm flexion may prevent drug administration

General Principles:

- select one sedative (benzo) and one antipsychotic agent and titrate this to effect. Avoid switching agents, classes as this leads to unpredictable pharmacodynamics.
- Use longer acting agents if situation allows - this avoids the "roller-coaster" of patients being too deep, then awake 15 minutes later. Long-action = smoother ride
- if you have used a "rapid take down" dose - then you should be prepared to :
 1. Manage airway, CV collapse immediately
 2. Have longer acting agents ready to administer for the "wake up phase"

Indications for endotracheal intubation:

1. **Immediate RSI:**
 - a. **Obvious need for urgent CT brain - e.g. obvious head injury**
2. **Airway compromise**
 - a. **e.g. Signs of obstruction (snoring, hypoxia) not improved with chin lift, jaw thrust, and/or oropharyngeal/nasopharyngeal airways**
3. **Acute intoxication making sedation unpredictable**
4. **Failed trial of adequate emergency sedation (minimum 0.5mg/kg diazepam/haloperidol/droperidol and/or 2mg/kg ketamine with SAT score > 1)**
5. **Respiratory depression indicated by rising ETCO2 value or low pulse oximetry values.**

Authorship & Disclaimer : Dr Minh Le Cong, Dr Andy Buck, Dr George Douros, Dr Casey Parker & Dr Tim Leeuwenburg. This guideline is meant only as consensus recommendations as to how to approach the safe sedation of the acutely agitated patient. It is based on the clinical expertise and research of the authors in Australia.

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