

G01: Extreme Agitation and Excited Delirium

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Reviewed:

Introduction

This guideline applies to patients who present with extreme agitation or aggressive and violent behaviour. It is intended to provide protection for both patients and responders in circumstances where there is a high risk of violence. Chemical sedation is to be used when the patient is a risk to themselves or others, and cannot be safely managed through other means. **It should be applied judiciously, and with sound clinical judgment.**

Paramedic safety is paramount at all times. Ensure that sufficient and necessary assistance is available prior to administration of sedation. Clear communication with all parties involved in restraining the patient will help reduce the risk of injuries.

Sedation may allow for a safer transport, and provide an earlier opportunity for hospital staff to evaluate the patient. In communities where they are available, Advanced Care Paramedics should be considered as a resource to assist in the safe transport of these patients.

In communities where advanced care is not available, do not approach a violent patient: call for police to assist in restraining and securing the patient.

Essentials

- Consider and treat underlying causes
 - Hypoxia
 - → [A07: Oxygen and Drug Administration](#)
 - → [B01: Airway Management](#)
 - Hypoglycemia
 - → [E01: Hypoglycemia and Hyperglycemia](#)
 - Head injury
 - → [H03: Head Trauma](#)
 - Drug actions or withdrawal
 - Infection (pneumonia, sepsis)
 - → [K02: Sepsis](#)
 - Electrolyte imbalances
- IM ketamine is the preferred drug to gain medical control in severe agitation and excited delirium because of its faster onset, shorter duration, superior efficacy and fewer side effects compared to midazolam.
- Do not titrate ketamine for Excited Delirium (ExDS)
 - Administer 5mg/kg IM
 - Administration may require two or more IM injections
 - Maximum volume for Adult IM injections:
 - Deltoid 2.0 mL
 - Lateral thigh 4.0-5.0 mL
 - Larger Muscles (Gluteal) 5.0 mL
 - Additional administration of midazolam is usually not indicated but may be given if maintenance of sedation is required.

Additional Treatment Information

WARNING: SUDDEN CESSATION OF RESISTANCE OR VERBALIZATION UNDER RESTRAINED CIRCUMSTANCES CAN REPRESENT A CARDIORESPIRATORY EMERGENCY. PATIENT ADVOCACY IS CRITICAL IN THIS SITUATION, AND A RAPID EVALUATION OF PATIENT VITAL SIGNS IS IMPERATIVE. IMMEDIATE RESUSCITATION MAY BE REQUIRED.

- Sudden death in excited delirium (ExDS) has been associated with prone restraint of patients. If it is necessary

to place the patient prone to gain control, monitor the airway and vital signs closely, and always move the patient to a supine or ¾ prone position as soon as possible.

- Prolonged physical struggle, multiple deployments of conducted energy weapons, posterior pressure restraint (i.e., prone position, neck pressure, posterior chest pressure) and unremitting physical resistance are risk factors for rapid cardiovascular collapse.
- Record the Richmond Agitation Sedation Scale (RASS) score pre- and post-ketamine administration.
 - → [Richmond Agitation Sedation Scale](#)
- Hypersalivation is a known side effect of ketamine. On most occasions, suctioning will be sufficient. If hypersalivation becomes difficult to manage, or the airway becomes compromised, treatment may include administration of atropine.

Referral Information

All sedated patients must be transported to an emergency department for observation.

General Information

- Excited Delirium Syndrome (Extreme agitation and delirium)
 - Often requires emergent sedation
 - Often includes a history of drug use and/or psychiatric illness□
 - Most often males with a mean age of 35 years□
 - Associated hyperthermia□
 - Associated severe metabolic acidosis□
 - Shouting Paranoia/panic
 - Violence towards others
 - Insensitivity to pain
 - Unexpected physical strength and endurance
 - Bizarre and/or aggressive behaviour
 - Constant or near constant physical activity
 - Unintelligible words
- Delirium
 - Rarely requires emergent sedation
 - Characterized by an acute onset and changing severity of confusion, disturbances in attention, disorganized thinking and/or decreased level of consciousness□
 - Onset over hours to days□
 - Often worse at night□
 - Fluctuating emotions – outbursts, anger, crying, fearful□
 - Can co-exist with dementia□
- Dementia
 - Does not require emergent sedation
 - Characterized by a gradual and progressive decline in mental processing ability that affects short-term memory, language, communication, judgment and reasoning□
 - Gradual onset over months to years□
 - Frequently present with depression and apathy

Interventions

First Responder

- Await police restraint if indicated
- Position the patient 3/4 prone if possible. Be aware of the risks of positional asphyxia.
- Ensure effective respirations

- Provide supplemental oxygen as required, and if safe to do so
 - → [A07: Oxygen and Medication Administration](#)

Emergency Medical Responder – All FR interventions, plus:

- Monitor vital signs closely, including temperature
- Correct hypoglycemia
 - → [E01: Hypoglycemia and Hyperglycemia](#)
 - Glucogel 1 package applied to oral mucosa
- If transport is necessary, do not restrain patient prone
- Seek higher level of care intercept where available

Primary Care Paramedic – All FR and EMR interventions, plus:

- Correct hypoglycemia
 - [Glucagon](#)
 - [Dextrose](#)

Advanced Care Paramedic – All FR, EMR, and PCP interventions, plus:

- Attach cardiac monitor
- Intervene in agitation, aggression or behavioural emergency
 - Complete RASS assessment before and after medication administration
 - If RASS +4: [KetAMINE](#) intramuscularly
 - If RASS 2-3: [MIDAZOLam](#) intramuscularly or intravenously as required
- Consider [atropine](#) if salivation becomes unmanageable with suctioning

Critical Care Paramedic – All FR, EMR, PCP, and ACP interventions, plus:

- Consider anti-psychotics ([haloperidol](#))
 - EPOS orders required for anti-psychotic agents

Evidence Based Practice

[Violent/Agitated Patients](#)

References

1. Alberta Health Services. AHS Medical Control Protocols. Published 2020. [\[Link\]](#)
2. Ambulance Victoria. Clinical Practice Guidelines: Ambulance and MICA Paramedics. 2018. [\[Link\]](#)

