 Shared health Soins communs Manitoba	M17 - KETAMINE (KETELAR)	
	Version date: 2025-05-08	Effective date: 2025-05-09 (07:00)
ERS HIGH-ALERT MEDICATION (A03)		

INDICATIONS
<ul style="list-style-type: none"> • Moderate to severe pain as an adjunct or alternative (table A) • Severe agitation not responding to benzodiazepines and / or midazolam (table B) • Advanced airway maintenance (table C) • Procedural sedation & analgesia (table D) • Painful extrication without vascular access (table E)

WARNINGS
ABSOLUTE CONTRAINDICATIONS: <ul style="list-style-type: none"> • Hypersensitivity to ketamine • History of laryngospasm, hypersalivation or emergence reaction with ketamine • Schizophrenia • Age under 3 months ¹ • Airway obstruction • Respiratory depression • Hypotension or shock ² • Unstable hemodynamics (intramuscular / intranasal) ² • Myocardial ischemia or infarction
USE WITH CAUTION: <ul style="list-style-type: none"> • Compensated hypoperfusion ² • Hypertension / tachycardia • Raised intracranial or intraocular pressure • Decreased level of consciousness ³ • Third trimester of pregnancy

TABLE A: ANALGESIA ⁴	
INTRAVENOUS (INTRAOSSEOUS)	ICP / ACP
ALL PATIENTS OVER 3 MONTHS: <ul style="list-style-type: none"> • Administer 0.5 mg/kg by slow push over 1 to 2 minutes (maximum per dose = 40 mg) • Follow with 0.25 mg/kg after 10 minutes if necessary to achieve adequate analgesia • Repeat 0.25 mg/kg every 30 minutes as required to maintain adequate analgesia • Maximum per hour = 1 mg/kg 	

TABLE B: AGITATION ⁵

INTRAVENOUS (INTRAOSSEOUS)	ACP
ADULTS & ADOLESCENTS ONLY: <ul style="list-style-type: none"> • Administer 1 to 2 mg/kg by slow push over 1 minute • Repeat 0.5 to 1 mg/kg every 10 minutes as required 	
INTRAMUSCULAR ²	ACP
ADULTS & ADOLESCENTS ONLY: <ul style="list-style-type: none"> • Administer 4 to 6 mg/kg • Repeat 2 to 3 mg/kg once after 10 minutes if required 	

TABLE C: ADVANCED AIRWAY MANAGEMENT

INTRAVENOUS (INTRAOSSEOUS)	ACP
ALL PATIENTS OVER 3 MONTHS: <ul style="list-style-type: none"> • Administer 1 mg/kg by slow push over 1 minutes • Repeat 0.5 mg/kg every 10 minutes as required 	

TABLE D: PROCEDURAL SEDATION & ANALGESIA ⁶

INTRAVENOUS (INTRAOSSEOUS)	ACP
ALL PATIENTS OVER 3 MONTHS: <ul style="list-style-type: none"> • Administer 1 to 2 mg/kg by slow push over 1 to 2 minutes • Repeat 0.5 to 1 mg/kg every 5 to 10 minutes as required 	
INTRAMUSCULAR ²	ACP
ALL PATIENTS OVER 3 MONTHS: <ul style="list-style-type: none"> • Administer 5 mg/kg • Repeat 2.5 mg/kg once after 10 minutes if required 	

TABLE E: EXTRICATION WITHOUT VASCULAR ACCESS ⁷

INTRANASAL	PCP / ICP / ACP
<p>ALL PATIENTS OVER 3 MONTHS:</p> <ul style="list-style-type: none"> • Administer 1 mg/kg (maximum per dose = 100 mg) • Repeat 0.5 mg/kg every 10 minutes as required 	



NOTES

1. Limited information is available on ketamine dosing for infants and children, and its safety in newborns and young infants is not established.
2. Ketamine can cause hypotension and deterioration in the patient who is otherwise compensating for hemodynamically compromise. Be especially careful when administering without vascular access, especially by the intramuscular route.
3. Use caution when combining ketamine with other CNS depressants, especially opioids. Consider smaller individual and cumulative doses.
4. Ketamine is relatively more sedating than other analgesics and is seldom used alone as a primary agent. However, it is effective as an adjunct to other analgesics or when other medications are contraindicated.
5. Ketamine is indicated for the treatment of severe agitation when benzodiazepines and / or antipsychotics have been ineffective.
6. Ketamine combines both analgesia and sedative properties. It can be used alone for procedural sedation, or in combination with propofol or midazolam. Midazolam may decrease the incidence of emergence reactions.
7. In exceptional circumstances such as painful extrication when vascular access cannot be obtained, paramedics with the primary work scope and above may consider intranasal ketamine if the patients vitals signs are stable and ready access to the airway is available.
8. Ketamine is not compatible with Ringer's lactate solution.

LINKS

- A03 - High Alert Medications
- A13 - Procedural Sedation & Analgesia

APPROVED BY

	
Provincial Medical Director	Associate Provincial Medical Director

VERSION CHANGES (refer to X08 for change tracking)

- Correction of analgesic dosing