SECTION: Pediatric General Medical Emergencies

PROTOCOL TITLE: General - Pain Control

REVISED: 06/2017

Protocol
9-8

PAIN MANAGEMENT

OVERVIEW:
The practice of pre-hospital emergency medicine requires expertise in a wide variety of pharmacological and non-pharmacological techniques to treat acute pain resulting from a myriad of injuries and illness. One of the most essential missions for all healthcare providers should be the relief and/or prevention of pain and suffering. Approaches to pain relief must be designed to be safe and effective in the organized chaos of the pre-hospital environment. The degree of pain and the hemodynamic status of the patient will determine the rapidity of care.

HPI	Signs and Symptoms	Considerations
• Age • Location • Duration • Severity (1-10) • Past medical history • Medications • Drug allergies	• Severity (pain scale) • Quality (sharp, dull, etc) • Radiation • Relation to movement, respiration • Increased with palpation of area	• Musculoskeletal • Visceral (abdominal) • Cardiac • Pleural, respiratory • Neurogenic • Renal (colic)

	EMR	EMT	A	I	P
1. Perform general patient management.	•	•	•	•	•
2. Administer oxygen to maintain *SPO$_2$* 94 - 99%	•	•	•	•	•
3. Determine and document patient's pain score assessment.	•	•	•	•	•
4. Place patient on cardiac monitor per patient assessment.				•	•
5. Establish IV of normal saline per patient assessment.			•	•	•
6. Determine if pain is acute or chronic (3 weeks or more). If chronic, attempt to identify cause (cancer/palliative care)		•	•	•	•

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PAIN MANAGEMENT

	EMR	EMT	A	I	P
7. If pain is mild, moderate, or chronic (cancer/palliative care excluded), *consider* use of non-opioid treatment. If age > 10 yrs, may alternatively consider one of the following, *if available*: a. Nitronox (via patient administered dosing system) b. Acetaminophen 10-15 mg/kg PO c. Nonsteroidal such as ibuprofen 4-10 mg/kg PO (avoid in pts with open fractures or suspected hip/femur fractures)		OMD Option	OMD Option	OMD Option	OMD Option
8. If NO nonsteroidal administered, for mild, moderate, or chronic pain (cancer/palliative care excluded), consider TORADOL 15 mg IV or 30 mg IM. Avoid use If age less than 10 years or patients with history of renal disease.			•	•	•
9. If significant pain, administer FENTANYL 2mcg/kg INTRANASAL (max first dose of 100 mcg) half dose in each nostril. May consider additional dose of up to 100mcg after 5 minutes if pain persists –OR-*FENTANYL* 1 mcg / kg IV, or IM (max single dose of 100 mcg). *** *There are no documented cases of chest rigidity with the administration of Fentanyl INTRANASALLY* ***			•	•	•
10. If Fentanyl unavailable, administer *MORPHINE SULPHATE* 0.1 mg / kg IV or IM (max single dose of 5.0 mg). Sickle cell patients may be given higher doses up to 10 mg IV or IM.			•	•	•
11. Repeat the patient's pain score assessment.	•	•	•	•	•

	EMR	EMT	A	I	P
12. If indicated based on pain assessment, repeat pain medication administration after 10 minutes of the previous dose. Maximum total dose of Fentanyl is 200 mcg and Morphine Sulphate is 20 mg for non-sickle cell patients. Sickle cell patients may have up to a total of 400 mcg of Fentanyl or 40mg of Morphine Sulphate.			•	•	•
13. Transport in position of comfort and reassess as indicated.		•	•	•	•

Universal Pain Assessment Tool

Verbal Descriptor Scale	0 1 2 3 4 5 6 7 8 9 10					
	No pain	Mild pain	Moderate pain	Severe pain	Very severe pain	Excruciating Pain
Wong-Baker Scale						
	Alert Smiling	No humor Serious, flat	Furrowed brow Pursed lips Breath holding	Wrinkled nose Raised upper lip Rapid breathing	Slow blink Open mouth	Eyes closed Moaning Crying
Activity Tolerance Scale	No pain	Can be ignored	Interferes with tasks	Interferes with concentration	Interferes with basic needs	Bed rest required
Spanish	Nada de dolor	Un poquito dedolor	Un dolor leve	Dolor fuerte	Dolor demasiado fuerte	Un dolor insoportable

Chart Courtesy of Richmond Ambulance Authority

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PAIN MANAGEMENT

Age	Term	6 month	1 year	3 years	6 years	8 years	10 years	12 years	14 years
Weight (lb / kg)	6.6 lb 3 kg	17.6 lb 8 kg	22 lb 10 kg	30.8 lb 14 kg	44 lb 20 kg	55 lb 25 kg	75 lb 34 kg	88 lb 40 kg	110 lb 50 kg
Fentanyl IM	3mcg	8mcg	10mcg	14mcg	20mcg	25mcg	34mcg	40mcg	50mcg
Fentanyl IN	6mcg	16mcg	20mcg	28mcg	40mcg	50mcg	50mcg	50mcg	50mcg
Morphine Sulfate 0.1 mg / kg	N/A	N/A	1.0 mg	1.4 mg	2.0 mg	2.5 mg	3.5 mg	4.0 mg	5.0 mg
Toradol 0.5 mg / kg	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20mg	25mg

PEARLS:

1. Pain severity (0 - 10) is a vital sign that should be recorded before and after IV or IM medication administration and upon arrival at destination.
2. Contraindications to opiate administration include hypotension, head injury, and respiratory depression.
3. All patients should have drug allergies ascertained prior to administration of pain medication.
4. Patients receiving narcotic analgesics should be administered oxygen.
5. Narcotic analgesia was historically contraindicated in the pre-hospital setting for abdominal pain of unknown etiology. It was thought that analgesia would hinder the ER physician or surgeon's evaluation. Recent studies have demonstrated opiate administration may alter the physical examination findings, but these changes result in no significant increase in management errors.[1]
6. Fentanyl is contraindicated for patients who have taken MAOIs within past 14 days, and used with caution in patients with head injuries, increased ICP, COPD, and liver or kidney dysfunction.

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[1] JAMA. 2006; 296(14):1764-74 (ISSN: 1538-3598)
Ranji SR; Goldman LE; Simel DL; Shojania KG