05-0814 – Pediatric Pain Management

Authority:

Health and Safety Code Division 2.5, California Code of Regulations, Title 22, Division 9

Definition

Pain is a subjective unpleasant sensory and emotional experience associated with actual or potential tissue damage.

Precautions

1. Careful titration of medication to avoid respiratory depression.
2. Do not give Fentanyl too rapidly to avoid Rigid Chest Syndrome.
3. May use either Morphine or Fentanyl either alone or in combination (see pain management guidelines below).
4. Do not exceed maximum total dose of opioids.
5. The total pediatric opioid dose = 10 mg Morphine equivalent (10 mg Morphine, 100 mcg Fentanyl, or combination of the two medications equaling 10 mg Morphine equivalent).
6. Monitor and maintain age appropriate vital signs.
7. Don't utilize if the patients GCS is less than 14.
8. If mental status not at base line should consider not using opioids.
9. Use extreme caution in patients that may have sustained a traumatic brain injury and are under the influence of other substances (for example alcohol, illicit drugs, and sedatives/hypnotics).
10. Use caution in the pediatric patient less than 2 years of age, renal failure, and liver disease.
11. Use caution with other agents (Benzodiazepines) that will potentiate the opioids.

Indications

Any patient with a complaint of moderate or significant pain including but not limited to:

1. Burn patients, frostbite
2. Bites and envenomation
3. Crush injuries
4. Extremity injuries
5. Traumatic injury
6. Abdominal pain
7. Sickle cell crisis, cancer
8. Prolonged extrication
9. Renal colic

Relative Contraindications

Known or suspected alcohol or drug abuse.

Contraindications

1. Head injuries with GCS less than 14.
2. Hypotension in the setting of trauma or other serious medical condition. Use the length-based weight tape to establish target systolic blood pressure.
3. Allergy or hypersensitivity to narcotics.

Treatment - BLS

1. Airway management be prepared to suction and assist ventilations as needed.
2. Supplemental O2, continuous O2 oximetry monitoring.
3. Titrate oxygen as needed to maintain SpO2 equal to 92%.
4. Position of comfort, splint injured extremity, ice and elevation as needed to prevent swelling.
5. Psychological support.

Treatment - ALS

1. Continuous cardiac monitor and continuous pulse oximetry monitor. If available utilize End Tidal CO2 monitoring.
2. Use side stream ETCO2 to monitor pediatric patients with doses greater than 50 mcg in addition to pulse oximetry.
3. Please note that a pediatric patient is defined as less than 12 years of age or equal to greater than 40 kg.
4. IV Normal Saline preferred, rather than saline lock.

    a. Morphine sulfate 0.1 mg/kg IV/IO may repeat every 5 to 10 minutes as needed. Maximum total dose 10 mg Morphine. A maximum single dose of Morphine is 2.5 mg. Only if systolic BP above the length-based weight tapes target.
    b. Morphine sulfate 0.1 mg/kg IM may repeat every 10 to 15 minutes up to maximum of 10 mg total dose. Only if systolic BP above the length-based weight tape target.

    OR

    a. Fentanyl 0.5 mcg/kg to 1 mcg/kg IV/IO may repeat every 5 to 10 minutes as needed for maximum single dose of 25 mcg, slow IV administration.
    b. Total max dose of Fentanyl is 100 mcg.
    c. Repeat doses of Fentanyl IV/IO are 0.5 mcg/kg to 1 mcg/kg (maximum 25 mcg) in 5-minute intervals and ONLY if systolic BP above the length-based weight tape target.
    d. Fentanyl 1 mcg/kg mcg IM may repeat every 10 to 15 minutes up to a maximum of 100 mcg and ONLY if systolic BP above the length-based weight tape target.
    e. If repeated IM doses of Fentanyl are required, highly recommend IV access.
    f. Fentanyl IN 1.5 mcg/kg single maximum dose 50 mcg. May repeat once in 10 minutes and ONLY if systolic BP above the length-based weight tape target. Please deliver ½ dose each nostril.
    g. If there is concern that the maximum dose of Fentanyl 100 mcg is not enough, may request additional dosing per BPHO.

5. Naloxone 0.1 mg/kg IN/IV/IO/and IM as needed to reverse respiratory depression. Maximum single dose 2 mg and may repeat in 5 minutes if partial response.
6. Narcan (Naloxone) don't use for the treatment of pinpoint pupils alone.
7. Give only enough Narcan (Naloxone) to obtain an independent respiratory rate but not necessarily "wake" the patient.
8. Give only enough Narcan (Naloxone) to obtain an independent respiratory rate.
9. Please use caution with pediatric patients under hospice care who may be on chronic opioids to avoid sudden withdrawal (can be life threatening).
10. Narcan (Naloxone) **MAY** reverse Rigid/Stiff Chest Syndrome.
11. Ondansetron may be used to prevent or treat nausea associated with opioids (Narcotics). Zofran and opioids are often used together. Please refer to Nausea/ Vomiting protocol for utilization.

Documentation

1. Assessment of pain before and after each administration of narcotic analgesia.
2. Rate on a scale of 0-10, consider visual analog scale.
3. Medication dose and patient response including pain score is to be documented with each administration of narcotic analgesia

Opioid Scale

1. Maximum total opioid dose = 10 mg Morphine equivalents.
2. 10 mg Morphine = 100 mcg Fentanyl or a combination of Morphine and Fentanyl.
3. For example, 50 mcg of Fentanyl equals to 5 mg Morphine.
4. Repeat Morphine dosing is 0.05 mg to 0.1 mg/kg slow IV/IO with a single maximum of 2.5 mg per dose.
5. Morphine dosing is 0.2 mg/kg IM with single maximum of 5 mg per dose.
6. Fentanyl dosing is 1 mcg/kg slow IV/IO with a single maximum of 25 mcg per dose.
7. Fentanyl dosing is 1.5 mcg/kg IN with a single maximum of 50 mcg per dose.

Considerations:

1. Remember BLS measures always.
2. For minor complaints of pain equal to or less than 4 out of 10 consider other agents.
3. Consider differences between chronic and acute duration.