

Southern Illinois Regional EMS System

JJ-20 MORPHINE SULFATE

1. Class:
 - 1.1. Opioid analgesic.
2. Description:
 - 2.1. Morphine sulfate is a natural opium alkaloid that has a primary effect of analgesia. It also increases peripheral venous capacitance and decreases venous return (chemical phlebotomy). Morphine sulfate causes euphoria and respiratory and central nervous depression. Secondary pharmacological effects of morphine include depressed responsiveness of alpha-adrenergic receptors (producing peripheral vasodilation) and baroreceptor inhibition. In addition, because morphine decreases preload and afterload, it may decrease myocardial oxygen demand. The properties of this medication make it extremely useful in emergency care. Morphine sulfate is a Schedule II medication.
3. Onset and Duration:
 - 3.1. Onset: 1-2 minutes after administration.
 - 3.2. Duration: 2-7 hours.
4. Indications:
 - 4.1. Chest pain associated with myocardial infarction.
 - 4.2. Pulmonary edema, with or without associated pain.
 - 4.3. Moderate to severe acute and chronic pain.
5. Contraindications:
 - 5.1. Hypersensitivity to narcotics.
 - 5.2. Hypovolemia.
 - 5.3. Hypotension.
 - 5.4. Head injury or undiagnosed abdominal pain.
 - 5.5. Increased intracranial pressure.
 - 5.6. Severe respiratory depression.
 - 5.7. Patients who have taken MAO inhibitors within 14 days.
6. Adverse Reactions:
 - 6.1. Hypotension.
 - 6.2. Tachycardia.
 - 6.3. Bradycardia.
 - 6.4. Palpitations.
 - 6.5. Syncope.
 - 6.6. Facial flushing, diaphoresis, itching.
 - 6.7. Respiratory depression.
 - 6.8. Euphoria.
 - 6.9. Bronchospasm.
 - 6.10. Dry mouth.
 - 6.11. Allergic reaction.

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JJ-18 MORPHINE SULFATE (continued)

7. Drug Interactions:
 - 7.1. Central nervous system depressants may potentiate effects of morphine (respiratory depression, hypotension, sedation).
 - 7.2. Phenothiazines may potentiate analgesia.
 - 7.3. MAO inhibitors may cause paradoxical excitation.
8. How Supplied:
 - 8.1. Morphine is supplied in tablets, suppositories, and solution.
 - 8.2. Parenteral preparations are available in many strengths:
 - 8.2.1. A common preparation is 10mg in 1ml of solution, ampules and Tubex syringes.
9. Dosage and Administration:
 - 9.1. Adult:
 - 9.1.1. 2-4mg slow IV over 1-5 minutes every 5-30 minutes; titrated to effect.
 - 9.2. Pediatrics:
 - 9.2.1. 0.1-0.2mg/kg/dose IV (maximum total dose of 15mg).
10. Special Considerations:
 - 10.1. Pregnancy Category B:
 - 10.1.1. If not used for prolonged periods or in high doses at term.
 - 10.1.2. Narcotics rapidly cross the placenta.
 - 10.2. Safety in neonates has not been established.
 - 10.3. Use with caution in the elderly, those with asthma, and those susceptible to central nervous system depression.
 - 10.4. Morphine should be used with caution in chronic pain syndromes.
 - 10.5. Morphine may worsen bradycardia or heart block in inferior myocardial infarction (vagotonic effect).
 - 10.6. Naloxone should be readily available.