Morphine

Morphine is a potent medication used for pain relief. It is an opioid receptor agonist that has serious side effects, if improperly dosed. This medication because of its euphoric effects has a serious risk of dependency.



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Mechanism

Opioid Receptor Agonist
Poppy-droid Receptor Dragonist
This medication binds to opioid receptors and enhances their effect. Three types of opioid receptors exist, mu, kappa, and delta with mu being the primary target of morphine to reduce pain.

Indications

Pain
Pain-bolt
Morphine is specifically used in situations of chronic or severe pain such as with cancer, pancreatitis or traumatic injuries. With chronic pain this medication is often delivered in a patient controlled anesthesia (PCA) pump which allows for continuous dosing based on the patient’s perceived level of pain up to a maximum dose.

Myocardial Infarction
Mayo-heart Infarction-fart
Morphine is also indicated during myocardial infarction for two reasons. It decreases the anxiety level and pain experienced by the patient, which decreases stress and sympathetic responses, but also has vasodilating effects all of which decrease the oxygen demand of the heart. Morphine may also be used in angina and pulmonary edema for similar reasons.

Side Effects

Nausea and Vomiting
Vomiting
Often patients may experience nausea and vomiting as this medication may stimulate the chemoreceptor trigger zone (CTZ) in the brain. Slow administration of the medication decreases the side effect.

CNS Depression
CNS-brain Deflated
CNS depression, especially respiratory rate, is a side effect of major concern. Ensure the patient’s respiratory rate is adequate and frequently assess the patient’s level of consciousness. This medication also causes a euphoric state.

Biliary Colic
Bill-duck Coal-lick
This medication may cause a spasm of the bile duct and subsequently serious abdominal pain, as bile is unable to leave the gall bladder into the duodenum.

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Constipation

Corked Con-toilet

A very common side effect of all opioid medications is constipation. The frequency of the side effect increases with long term use and high dosing. Some patients are often given stool softeners to prevent this common side effect. Urinary retention can also occur.

Increased Intracranial Pressure (ICP)

Up-arrow Cranium Pressure-cooker

Caution should be exercised when giving this medication to patients with head injuries as it may cause an increase in intracranial pressure.

Pupillary Constriction

Purple-pupil Constrictor

Opioid medications cause miosis or pupillary constriction. Proper assessment of the patient’s pupils could help in the identification of a medication that was taken.

Hypotension

Hippo-BP

Decrease in blood pressure is a common side effect of this medication due to its vasodilatory effects. Check the blood pressure of patients before administration.

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