

Presentation

Parenteral – ampoules containing morphine sulphate 10 milligrams in 1 ml.

Oral – vials containing morphine sulphate 10 milligrams in 5 ml.

Indications

Pain associated with suspected myocardial infarction (analgesic of first choice).

Severe pain as a component of a balanced analgesia regimen.

The decision about which analgesia and which route should be guided by clinical judgement ([refer to adult and child pain management guidelines](#)).

Actions

Morphine is a strong opioid analgesic. It is particularly useful for treating continuous, severe musculoskeletal and soft tissue pain.

Morphine produces sedation, euphoria and analgesia; it may both depress respiration and induce hypotension.

Histamine is released following morphine administration and this may contribute to its vasodilatory effects. This may also account for the urticaria and bronchoconstriction that are sometimes seen.

Contra-indications

Do **NOT** administer morphine in the following circumstances:

- Children under 1 year of age.
- Respiratory depression (adult <10 breaths per minute, child <20 breaths per minute).
- Hypotension (actual, not estimated, systolic blood pressure <90 mmHg in adults, <80 mmHg in school children, <70 mmHg in pre-school children).
- Head injury with significantly impaired level of consciousness (e.g. below P on the AVPU scale or below 9 on the GCS).
- Known hypersensitivity to morphine.
- Severe headache.

Cautions

Known severe renal or hepatic impairment – smaller doses may be used carefully and titrated to effect.

Use with **extreme** caution (minimal doses) during pregnancy. **NOTE:** Not to be used for labour pain where entonox is the analgesic of choice.

Use morphine **WITH GREAT CAUTION** in patients with chest injuries, particularly those with any respiratory difficulty, although if respiration is inhibited by pain, analgesia may actually improve respiratory status.

Any patients with other respiratory problems e.g. asthma, COPD.

Head injury. Agitation following head injury may be due to acute brain injury, hypoxia or pain. The decision to administer analgesia to an agitated head injured patient is a clinical one. It is vital that if such a patient receives opioids they are closely monitored since opioids can

cause disproportionate respiratory depression, which may ultimately lead to an elevated intracranial pressure through a raised arterial pCO₂.

Acute alcohol intoxication. All opioid drugs potentiate the central nervous system depressant effects of alcohol and they should therefore be used with great caution in patients who have consumed significant quantities of alcohol.

Medications. Prescribed antidepressants, sedatives or major tranquillisers may potentiate the respiratory and cardiovascular depressant effects of morphine.

Side Effects

- Respiratory depression.
- Cardiovascular depression.
- Nausea and vomiting.
- Drowsiness.
- Pupillary constriction.

Additional Information

Morphine is a Class A controlled drug under Schedule 2 of the Misuse of Drugs Regulations 1985, and must be stored and its prescription and administration documented in accordance with these regulations.

Morphine is not licensed for use in children but its use has been approved by the Medicines and Healthcare products Regulatory Agency (MHRA) for 'off label' use. This means that it can legally be administered under these guidelines by paramedics.

Unused morphine in open vials or syringes must be discarded in the presence of a witness.

Special Precautions

Naloxone can be used to reverse morphine related respiratory or cardiovascular depression. It should be carefully titrated after assessment and appropriate management of ABC for that particular patient and situation ([refer to naloxone guideline](#)).

Morphine frequently induces nausea or vomiting which may be potentiated by the movement of the ambulance. Titrating to the lowest dose to achieve analgesia will reduce the risk of vomiting. The use of an anti-emetics should also be considered whenever administering any opioid analgesic ([refer to ondansetron and metoclopramide guidelines](#)).