

Guideline for monitoring of intrathecal (spinal) opiates

Intrathecal opiates may be used as part of an anaesthetic technique in theatre to help to alleviate post-operative pain or to improve the quality and duration of a spinal anaesthetic. By using these drugs injected into the cerebrospinal fluid (CSF), their duration of action may be prolonged- which may improve analgesia but also risks delayed presentation of side effects in these patients, most importantly, respiratory depression. Due to this risk, an increased frequency of monitoring is necessary for these patients- dependent on the opiate that is used. This protocol refers only to use in adults.

Respiratory depression from IT opioids is rare – the risk is thought to be no higher than when opioids are given IV or IM. However the risk is thought to be increased in some patient groups:

Groups at increased risk of respiratory depression with intrathecal opiates:

- Obesity
- Concurrent parenteral (IV, IM or subcutaneous) opiates or sedatives
- Obstructive sleep apnoea (including patients at risk of OSA but undiagnosed)
- Diabetes
- Elderly patients, especially opioid naïve

Intrathecal opiates may be used in these 'at risk' groups at the discretion of the anaesthetist, however the risk of complications is thought to be higher. The patient may require longer duration of monitoring, or a higher level of monitoring (e.g. HDU) or other requests such as post-operative oxygen therapy

Documentation of intrathecal opiate use

The use of intrathecal opiates and appropriate monitoring should be communicated:

- a. On the anaesthetic chart
- b. By application of a sticker (from recovery) on the post-op observations chart
- c. By verbal handover to recovery staff and thereafter to ward staff
- d. If a PCA is also being used then use of intrathecal opioids should be noted on the PCA monitoring chart

If a requirement for increased length of monitoring (e.g. in an 'at risk patient'), this should be additionally documented on all the above.

Patient monitoring on wards

The following should be monitored and documented on the post-op/NEWS chart:

- Respiratory rate
- Oxygen saturations
- Conscious level

The frequency/duration of monitoring the above parameters will depend on the drug used (please see below)

If the patient is otherwise well and other observations have been normal, then there is no requirement to wake the patient from normal sleep to assess conscious level

Naloxone and an Ambubag must be immediately available.

Following administration of intrathecal opiates the following monitoring is required

FENTANYL	HOURLY monitoring for 2 hours after timing of spinal insertion <i>If patient remains stable, then:</i> EVERY 2 hours after this for a further 2 hours (total 4 hours)
DIAMORPHINE	HOURLY monitoring for 6 hours after timing of spinal insertion <i>If patient remains stable, then:</i> EVERY 2 hours after this for a further 6 hours (total 12 hours)

Observations following this should be dictated as per the clinical condition as per the NEWS score. If the patient's observations are abnormal, or clinical condition is otherwise concerning then revert to hourly observations and organise an urgent review by ward doctor

The patient should not be discharged home before 4 hours following administration of intrathecal fentanyl or 12 hours following administration of intrathecal diamorphine, and should have an intravenous cannula in situ for this time period

Do not give parenteral opioids (such as IV or IM morphine, or morphine PCA) or sedatives (such as temazepam or zopidone) in the first 24 hours **unless** prescribed by or discussed with an anaesthetist or the acute pain service.

Treatment of side effects due to intrathecal opiates

Side effect	Management
Nausea & vomiting	<ul style="list-style-type: none"> • Give prescribed antiemetics • Check for signs of hypovolaemia and hypotension as can cause nausea • If routine antiemetics ineffective, consider low dose naloxone (0.5 micrograms/kg)
Pruritis (itch)	<p>Ondansetron 4mg IV may be effective</p> <ul style="list-style-type: none"> • Also consider low dose naloxone (0.5micrograms/kg) IV 2hrly. Please contact on-call anaesthetist or Acute Pain Service. • Antihistamines e.g. chlorphenamine are often given, however the major effect is sedation rather than relief of itch
Hypotension	If systolic blood pressure <90mmHg, request review and give fluid challenge
Respiratory depression	<p>IF APNEA OR RESPIRATORY ARREST THEN CALL 2222 Follow ALS algorithm. Support ventilation using bag and mask with high flow oxygen. Stop PCA if running.</p> <p>If respiratory rate <8 or sedation P/U on AVPU, give oxygen at 15L/min and call anaesthetist on bleep 3933. Stop PCA if running. Have naloxone and suction available.</p>
Reduced consciousness	<p>If drowsy but rousable (V on AVPU), give 2l/min oxygen via nasal cannulae and increase rate of observations. Contact APS</p> <p>If patient is unrousable:</p> <ul style="list-style-type: none"> • Stop PCA if running • Give 15l/min oxygen and open airway if required • Call anaesthetist on 3933 • Have naloxone and suction available
Urinary retention	<p>If patient hasn't passed urine within 8h of spinal anaesthetic then perform bladder scan</p> <p>If bladder volume >500ml then consider inserting a urinary catheter</p>
Hypoxia	<p>IF the patient is fully conscious AND respiratory rate is >8:</p> <ul style="list-style-type: none"> • Apply oxygen at 2l/min via nasal prongs <p>If the patient is still hypoxic despite these measures then:</p> <ul style="list-style-type: none"> • Apply HIGH FLOW OXYGEN via facemask • The patient must be reviewed urgently by medical team or anaesthetist