Pruritus Following Neuraxial Opiate Administration in Obstetric Patients

Diamorphine or fentanyl administered via the neuraxial (intrathecal (spinal) or epidural) route can be associated with generalised itch (pruritus). Pregnant women seem to be more susceptible to pruritus after neuraxial opiate administration than other populations, with incidence of 60-100%. Although some women do not find the itch troublesome, others find it irritating and distressing.

1. **Prevention**
   Consider whether neuraxial opiate is necessary e.g. cervical suture.
   Use the minimum effective concentration of neuraxial opioid.

2. **Treatment**
   Naloxone 200µg via subcutaneous route, repeated once after 30min if required

Naloxone will reverse the effect of opiates in the spinal cord and therefore reduce/eradicate troublesome itch. After a procedure, where neuraxial opiates have been administered (e.g. caesarean section), naloxone should be prescribed by the anaesthetist. If this has not been prescribed and the anaesthetist is busy, then it can be prescribed by the obstetric junior doctor.

If the anaesthetist prefers, then he/she can give intravenous naloxone in 40µg boluses titrated to effect every 5 minutes as required up to 200µg. Please note that higher intravenous doses (>2µg/kg/hr) are likely to lead to reversal of analgesia effect.

It is recommended that women who are either on treatment for opiate addiction or currently abusing opiates receive intravenous naloxone for treatment of itch as their response to opiate reversal is less predictable and they may experience breakthrough pain at lower doses of naloxone.

A note on other commonly used treatments:

1. **5-HT3 antagonists e.g. ondansetron**
   There may be a role for 5-HT3 antagonists in reducing the incidence and intensity of neuraxial opiate induced pruritus. This benefit is generally seen after neuroaxial

administration of morphine but not the other lipid soluble opiates. This is thought to be due to the less lipid soluble morphine having a slower onset of action therefore allowing time for 5-HT3 receptor blockade in the spinal cord by ondansetron before activation by morphine. However, in obstetric anaesthesia the lipid soluble opiates, with faster onset of action, are generally used. Therefore ondansetron is not as effective as its peak concentration occurs 15min following intravenous administration, therefore the 5-HT3 receptors are thought to already be occupied by the lipid soluble opiates.

N.B. *caution with 5-HT3 antagonists in breast feeding (BNF 70 March 2016 suggests to avoid).*

2. Antihistamines e.g. chlorphenamine maleate (Piriton)

H1 receptor antagonists have little or no effect on centrally mediated pruritus. The sedative antihistamines may help by interrupting the itch-scratch cycle by providing needed sleep but are not really effective at reducing the severity of the itch.

N.B. *caution with all antihistamines in breast feeding (BNF 70 March 2016 suggests to avoid).*

Further Reading

Kumar and Singh. Neuraxial opioid-induced pruritus: An update. *J Anaesthesiol Clin Pharmacol* 2013; 29(3) 303-307.
http://www.joacp.org/temp/JAnaesthClinPharmacol293303-3100074_083640.pdf

Originator:	Dr Tracey Dunn, Dr Allison Simpson
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