Parenteral opioids for maternal pain management in labour
25 November 2013

Findings of the review: Parenteral opioids are widely used to relieve pain during labour. Different parenteral opioids are available for pain relief and it is important to identify the one that is effective and safe for both the mother and her baby.

Fifty-seven studies (more than 7000 participants) reported on 29 different comparisons, with only one study contributing data to majority of the outcomes. Based on limited quality evidence (small studies and low statistical power), parenteral opioids provided some pain relief and moderate satisfaction with pain relief, but were associated with some maternal side-effects (drowsiness, nausea, vomiting). No side-effects were reported for the baby.

Implementation: Current evidence it is not clear with regard to what type of parenteral opioid is the most effective and safest for pain relief during labour.

Cochrane review


Abstract

Parenteral opioids are used for pain relief in labour in many countries throughout the world.

To assess the acceptability, effectiveness and safety of different types, doses and modes of administration of parenteral opioids given to women in labour.

We searched the Cochrane Pregnancy and Childbirth Group’s Trials Register (30 April 2011) and reference lists of retrieved studies.

We included randomised controlled trials examining the use of intramuscular or intravenous opioids
(including patient controlled analgesia) for women in labour. We looked at studies comparing an opioid with another opioid, placebo, other non-pharmacological interventions (TENS) or inhaled analgesia.

At least two review authors independently assessed study eligibility, collected data and assessed risk of bias.

We included 57 studies involving more than 7000 women that compared an opioid with placebo, another opioid administered intramuscularly or intravenously or compared with TENS to the back. The 57 studies reported on 29 different comparisons, and for many outcomes only one study contributed data. Overall, the evidence was of poor quality regarding the analgesic effect of opioids, satisfaction with analgesia, adverse effects and harm to women and babies. There were few statistically significant results. Many of the studies had small sample sizes, and low statistical power. Overall findings indicated that parenteral opioids provided some pain relief and moderate satisfaction with analgesia in labour, although up to two-thirds of women who received opioids reported moderate or severe pain and/or poor or moderate pain relief one or two hours after administration. Opioid drugs were associated with maternal nausea, vomiting and drowsiness, although different opioid drugs were associated with different adverse effects. There was no clear evidence of adverse effects of opioids on the newborn. We did not have sufficient evidence to assess which opioid drug provided the best pain relief with the least adverse effects.

Parenteral opioids provide some relief from pain in labour but are associated with adverse effects. Maternal satisfaction with opioid analgesia was largely unreported but appeared moderate at best. This review needs to be examined alongside related Cochrane reviews examining pain management in labour. More research is needed to determine which analgesic intervention is most effective, and provides greatest satisfaction to women with acceptable adverse effects for mothers and their newborn.

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