Epidural versus non-epidural or no analgesia in labour
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Abstract

Background
Epidural analgesia is a central nerve block technique achieved by injection of a local anaesthetic close to the nerves that transmit pain and is widely used as a form of pain relief in labour. However, there are concerns regarding unintended adverse effects on the mother and infant.

Objectives
To assess the effects of all modalities of epidural analgesia (including combined -spinal-epidural) on the mother and the baby, when compared with non-epidural or no pain relief during labour.

Search strategy
We searched the Cochrane Pregnancy and Childbirth Group Trials Register (June 2005).

Selection criteria
Randomised controlled trials comparing all modalities of epidural with any form of pain relief not involving regional blockade, or no pain relief in labour.

Data collection and analysis
Two of the review authors independently assessed trials for eligibility, methodological quality and extracted all data. Data were entered into RevMan and double checked. Primary analysis was by intention-to-treat; sensitivity analyses excluded trials with > 30% of women receiving un-allocated treatment.

Main results
Twenty-one studies involving 6664 women were included, all but one study compared epidural analgesia with opiates. For technical reasons, data on women's perception of pain relief in labour could only be included from one study which found epidural analgesia to offer better pain relief than non-epidural analgesia (weighted mean difference (WMD) -2.60, 95% confidence interval (CI) -3.82 to -1.38, 1 trial, 105 women). However, epidural analgesia was associated with an increased risk of instrumental vaginal birth (relative risk (RR) 1.38, 95% CI 1.24 to 1.53, 17 trials, 6162 women). There was no evidence of a significant difference in the risk of caesarean delivery (RR 1.07, 95% CI 0.93 to 1.23, 20 trials, 6534 women), long-term backache (RR 1.00, 95% CI 0.89 to 1.12, 2 trials, 814 women), low neonatal Apgar scores at five minutes (RR 0.70, 95% CI 0.44 to 1.10, 14 trials, 5363 women), and maternal satisfaction with pain relief (RR 1.18 95% CI 0.92 to 1.50, 5 trials, 1940 women). No studies reported on rare but potentially serious adverse effects of epidural analgesia.

Authors' conclusions
Epidural analgesia appears to be effective in reducing pain during labour. However, women who use this form of pain relief are at increased risk of having an instrumental delivery. Epidural analgesia had no statistically significant impact on the risk of caesarean section, maternal satisfaction with pain relief and long-term backache and did not appear to have an immediate effect on neonatal status as determined by Apgar scores. Further research may be helpful to evaluate rare but potentially severe adverse effects of epidural analgesia on women in labour and long-term neonatal outcomes.

http://www.cochrane.org/reviews/en/ab000331.html