

Incidence of long-term backache was similar between women who received epidural analgesia during labor and those who did not

Howell CJ, Kidd C, Roberts W, et al. A randomised controlled trial of epidural compared with non-epidural analgesia in labour. *BJOG*. 2001 Jan;108:27-33.

QUESTION

Does epidural analgesia during labor lead to long-term backache more than nonepidural analgesia?

DESIGN

Randomized (allocation concealed*), unblinded,* controlled trial with 12-month follow-up.

SETTING

Maternity unit of a district general hospital in Staffordshire, England, UK.

PATIENTS

369 women (mean age 24 y) at first pregnancy who were in spontaneous full-term labor, had a normal obstetric and medical history, had no contraindication to either form of analgesia, were willing to participate, and had continued eligibility at time of labor. Follow-up was 85% at 3 months and 88% at 12 months.

INTERVENTION

Women were allocated to epidural analgesia ($n = 184$) or nonepidural analgesia ($n = 185$). Epidural analgesia consisted of 0.25% bupivacaine (10 mL) with top-ups of 5 to 10 mL of 0.25% bupivacaine by the midwife as required. Nonepidural analgesia consisted of 50 to 100 mg of intramuscular pethidine, which could be repeated according to stan-

dard practice. Entonox was available to both groups. Labor was managed according to standard protocols.

MAIN OUTCOME MEASURES

Incidence of long-term backache. Secondary outcomes were operative delivery rates and maternal satisfaction. All outcomes were measured using a maternal health questionnaire.

MAIN RESULTS

Analysis was by intention to treat. 61 women (33%) in the epidural group did not receive the allocated epidural, and 52 women (28%) in the nonepidural group received an epidural. No differences existed in middle or lower back pain at either 3 or 12 months after delivery (Table). In the epidural group, duration of second-stage labor was increased by 19 minutes (95% CI 6.5 to 30.9, $P = 0.003$)

and the rate of instrumental delivery was higher (30% [epidural] vs 19% [nonepidural], $P = 0.03$). Cesarean-section rates were similar between groups. Maternal satisfaction with the experience of childbirth and pain relief was similarly high in both groups.

CONCLUSION

Incidence of long-term backache was similar between women receiving epidural analgesia and those receiving nonepidural analgesia during labor.

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*See Glossary.

Epidural vs nonepidural analgesia during labor for backache at 3 and 12 months†

Outcomes	Follow-up	Event rates	RRI (95% CI)	NNH
Low backache	3 mo	35% vs 34%	0.4% (-26 to 36)	Not significant
	12 mo	35% vs 27%	28% (-7.3 to 79)	Not significant
Middle backache	3 mo	22% vs 20%	8.7% (-29 to 68)	Not significant
	12 mo	16% vs 16%	1.0% (-63 to 40)	Not significant

†Abbreviations defined in Glossary; RRR, RRI, NNT, NNH, and CI calculated from data in article.

COMMENTARY

Epidural analgesia during labor is an effective method of relieving pain and has been used extensively since the mid-1970s, even in developing countries. Unfortunately, it has been widely incorporated into practice without enough evidence about its possible benefits and side effects. It is therefore not surprising that epidural analgesia has been blamed for a number of adverse events. This study by Howell and colleagues is the first randomized controlled trial (RCT) to specifically address the issue of postdelivery backache.

A limitation of this trial is that we may not be able to generalize the results because only 31% (875 of 2840) of all pregnant women attending the antenatal clinic were willing to participate. Of these, another 506 women withdrew in labor before randomization. Thus, only 42% (369 of 875) of women were eventually randomly allocated. A further problem was that nearly a third of the women in each group did not receive the allocated treatment, which reduces the power of the study.

Women in labor who request pain relief should be fully informed about the benefits and possible risks of their choice of analgesia (1). There are still many unanswered questions about different pain-relief methods (e.g., effect on fetus or neonate), which need to be addressed with further RCTs.

This study provides evidence to show that epidural analgesia is not a significant factor in causing postpartum backache. Women who have epidural analgesia are still satisfied with their overall experience of labor.

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Reference

1. Howell CJ. Epidural versus non-epidural analgesia for pain relief in labour. *Cochrane Database Syst Rev*. 2001;(2):CD000331.