

# Incidence of long term backache was similar between women receiving epidural analgesia during labour 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:** In women during labour, does epidural analgesia lead to long term backache more than non-epidural analgesia?

## Design

Randomised (allocation concealed\*), unblinded,\* controlled trial with 12 months follow up.

## Setting

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

## Patients

369 women (mean age 24 y) at first pregnancy who were in spontaneous, full term labour, 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 labour. Follow up was 85% at 3 months and 88% at 12 months.

## Intervention

Women were allocated to epidural analgesia (n = 184) or non-epidural 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. Non-epidural analgesia consisted of 50 to 100 mg of intramuscular pethidine, which could be repeated according to standard practice. Entonox was available to both groups. Management of labour was 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 non-epidural 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 labour 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] v 19% [non-epidural], p = 0.03). Caesarean 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 among women receiving epidural analgesia and those not receiving epidural analgesia during labour.

\*See glossary.

## COMMENTARY

Epidural analgesia during labour 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 various adverse events. This study by Howell *et al* is the first randomised controlled trial (RCT) to specifically address the issue of post-delivery backache.

A limitation of this trial is that we may not be able to generalise 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 labour before randomisation. 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 labour who request pain relief should be fully informed about the benefits and possible risks of their choice of analgesia.<sup>1</sup> There are still many unanswered questions about different pain relief methods (eg, 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 labour.

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

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*Epidural v non-epidural analgesia during labour for backache at 3 and 12 months†*

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

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