Long term backache after childbirth: prospective search for causative factors

Robin Russell, Ruth Dundas, Felicity Reynolds

Abstract

***Objectives*—To assess in a prospective randomised study the association between motor block resulting from high and low dose epidural infusions of bupivacaine in labour and the incidence of long term backache after childbirth, and to compare the incidence of backache in women not receiving epidural analgesia.**

***Design*—Women requesting epidural analgesia in labour between October 1991 and March 1994 were randomised to receive infusions of either bupivacaine alone or low dose bupivacaine with opioid. Data were collected during labour and the immediate postpartum period from these women and from women recruited at random over the same time from those who had laboured without epidural analgesia. A postal questionnaire about symptoms was sent three months after childbirth to all women. Further data were collected one year after childbirth from those who had reported new backache at three months.**

***Setting*—St Thomas's Hospital, London.**

Subjects—599 women were recruited, of whom 450 (75%) replied to a follow up questionnaire.

***Results*—152 women (33.8% of responders) reported backache lasting three months after delivery and, of these, 33 (7.3%) had not previously suffered with backache. There were no significant differences between the treatment groups in the incidence of postnatal backache overall or of new backache or any symptoms after childbirth. Among all demographic, obstetric, and epidural variables examined the only factors significantly associated with backache after childbirth were backache before and during pregnancy.**

***Conclusions*—The incidence of new long term backache was not significantly increased in women who received epidural analgesia in labour. Motor block resulting from epidural local anaesthetic administration was not a significant factor in the development of backache.**

Introduction

Two retrospective studies in the United Kingdom have suggested an association between epidural analgesia in labour and the development of new onset long term backache after delivery.[1,2] MacArthur and her colleagues also found an association between epidurals and other postnatal symptoms including frequent headaches, neck ache, upper limb paraesthesia, and visual disturbance.[3] In the first report,[1] 18.9% of women who received epidural analgesia apparently had new backache compared with 10.5% who used other methods of pain relief. Our retrospective findings were similar, with new backache in 17.8% of the epidural group and in 11.7% of the non-epidural group.[2] It was suggested that motor block of the lower back and legs from epidural administration of local anaesthetics led to poor posture and adoption of stressed positions for long periods as a result of effective analgesia and immobility.

In both these studies, however, inquiries about antenatal and postnatal symptoms were made retrospectively, and the findings relied on recall of events a variable number of years later. Furthermore, in both studies the incidence of antenatal backache was much lower than that reported in prospective studies on the incidence of backache during pregnancy.[4-7] We recorded the development of backache and other symptoms prospectively and examined the relation with motor block. We compared traditional epidural analgesia in which women receive local anaesthetic alone, and are hence likely to develop motor block, with a more modern epidural technique of combining low dose bupivacaine with an opioid, in which motor block can be expected to be minimal. More severe motor block should, if MacArthur's hypothesis is correct, produce more new long term backache. A non-randomised group of women not using epidural analgesia was recruited to compare their incidence of postnatal backache.

Subjects and methods

To evaluate the effect of epidural analgesia and motor block on the development of long term postnatal backache we studied three groups of women. Women requesting epidural analgesia in labour were randomised to receive one of two epidural infusion regimens. One group received plain bupivacaine, which would be expected to produce measurable motor block, the other group received low dose bupivacaine with opioid, which results in less motor block.[8] A third group of women were recruited to compare the development of backache in those not receiving epidural analgesia (see below).

After ethics committee approval, women requesting epidural analgesia in labour were recruited. All received an epidural loading dose of plain bupivacaine. When they were free of pain, informed consent was obtained, and women were randomised to one of two treatment groups (by opening a sealed envelope) and asked about various symptoms including backache and whether the symptoms had been present before and during pregnancy. They then received one of two infusion regimens: 0.125% bupivacaine alone or 0.0625% bupivacaine with either 2.5 g/ml fentanyl or 0.25 g/ml sufentanil. We have previously demonstrated no difference in analgesia, motor block, or side effects between the two opioids in these doses.[9] The infusions were continued until delivery and adjusted to maintain analgesia throughout labour. If mothers reported pain additional boluses of 5 ml of 0.25% bupivacaine were administered until analgesia was achieved. The incidence and severity of motor block and other maternal and fetal side effects were assessed hourly throughout labour. Motor block was assessed by using a modified Bromage score of leg weakness[10] and the rectus abdominis muscle test.[11] Full details of the epidural technique, its assessment, and obstetric outcome are given elsewhere.[12]

A non-randomised cohort of women was selected by taking the next delivery in the birth register of a woman of similar parity who had laboured without epidural analgesia for every alternate epidural recruit. These and the women who had received epidural analgesia were all interviewed the day after delivery and asked whether they had developed backache, neck ache, headache, abdominal pain, perineal pain, or urinary dysfunction. Women in the

Department of Anaesthesia, St Thomas's Hospital, London SE1 7EH
Robin Russell, *senior registrar*
Felicity Reynolds, *professor of obstetric anaesthesia*

Department of Public Health Medicine, United Medical and Dental Schools of Guy's and St Thomas's Hospitals, St Thomas's Campus, London SE1 7EH
Ruth Dundas, *assistant statistician*

Correspondence to:
Dr Russell.

BMJ 1996;312:1384–8

non-epidural group were questioned at the same time about symptoms during pregnancy. The demographic and obstetric details of the epidural and non-epidural groups were compared by using two sample t tests, χ^2 tests, and Mann-Whitney U tests. The obstetric details of the two epidural groups were also compared by using the χ^2 test and Mann-Whitney U test.

Three months after delivery a postal questionnaire was sent to all women. Mothers were asked about 17 different symptoms and whether they had been present before, during, and after pregnancy and whether the symptoms were still present. If there had been no reply to the questionnaire after six weeks, mothers were contacted, when possible, by telephone and the questionnaires completed verbally. Logistic regression analysis was used to assess the demographic and obstetric differences between responders and non-responders. During computer entry, questionnaire data were compared with the records collected during labour, delivery, and the first postnatal day. Women who reported that they had new postnatal backache three months after delivery but who had reported antenatal backache at the time of childbirth were not deemed to have new backache.

Stepwise logistic regression was used to assess which variables affect the development of long term backache.

Table 1—*Demographic characteristics of women who did and did not respond to questionnaire at three months after delivery*

Characteristic	Responders (n = 450)	Non-responders (n = 149)	Odds ratio (95% confidence interval) from logistic regression
Mean (SD) maternal age (years)	28.9 (5.20)	25.7 (5.20)	1.12 (1.07 to 1.16)
Mean (SD) gestational age (weeks)	39.6 (1.51)	36.2 (1.58)	1.21 (1.07 to 1.38)
No (%) of each race:			
White	311 (69.1)	65 (43.6)	1
West Indian	53 (11.8)	40 (26.8)	0.49* (0.28 to 0.84)
African	53 (11.8)	27 (18.1)	0.47* (0.26 to 0.82)
Other	33 (7.3)	17 (11.4)	0.48* (0.24 to 0.94)
No (%) who underwent epidural analgesia	319 (70.9)	80 (53.7)	2.28 (1.50 to 3.48)
No (%) who used transcutaneous nerve stimulation (TENS)	51 (11.3)	4 (2.7)	3.09 (1.06 to 9.01)

*Odds ratio compared with white subjects.

Table 2—*Demographic and obstetric details of women who had and did not have epidural analgesia during labour*

Characteristic	Epidural (n = 319)	No epidural (n = 131)	P value	Type of epidural: Bupivacaine alone (n = 157)	Type of epidural: Bupivacaine with opioid (n = 162)	P value
Mean (SD) maternal age (years)	28.8 (5.20)	29.1 (5.20)	> 0.1	29.1 (5.43)	28.6 (4.96)	> 0.1
Mean (SD) body mass index (kg/m^2)	25.2 (4.73)	25.4 (4.60)	> 0.1	25.5 (4.97)	25.0 (4.50)	> 0.1
No (%) primiparous	219 (68.6)	91 (69.5)	> 0.1	104 (66.2)	115 (71.0)	> 0.1
No (%) married	204 (63.9)	64 (48.8)	< 0.05	96 (61.1)	108 (66.7)	> 0.1
No (%) in each race:			< 0.001			> 0.05
White	225 (70.5)	86 (65.6)		101 (64.3)	124 (76.5)	
West Indian	26 (8.2)	27 (20.6)		18 (11.5)	8 (4.9)	
African	41 (12.8)	12 (9.2)		22 (14.0)	19 (11.7)	
Other	27 (8.5)	6 (4.6)		16 (10.1)	11 (6.8)	
Mean (SD) gestation (weeks)	39.6 (1.59)	39.7 (1.30)	> 0.1	39.6 (1.73)	39.6 (1.46)	> 0.1
No (%) with induced labour	150 (47.0)	21 (16.0)	< 0.001	74 (47.1)	76 (46.9)	> 0.1
No (%) with oxytocin augmentation	220 (69.0)	16 (12.2)	< 0.001	109 (69.4)	111 (68.5)	> 0.1
Median (range) length of labour (min):						
First stage	450 (63-1200)	250 (18-1125)	< 0.001	450 (63-1170)	455 (80-1200)	> 0.1
Passive second stage	25 (0-175)	0 (0-60)	< 0.001	30 (0-175)	25 (0-135)	> 0.1
Active second stage	42 (0-215)	24 (1-193)	< 0.001	40 (0-171)	47 (0-215)	> 0.1
No (%) with motor block				94 (59.9)	37 (22.8)	< 0.001
No (%) with type of delivery:			< 0.001			> 0.1
Spontaneous	152 (47.6)	118 (90.1)		78 (49.7)	74 (45.7)	
Instrumental	119 (37.3)	13 (9.9)		54 (34.4)	65 (40.1)	
Caesarean section	44 (13.8)	0		23 (14.6)	21 (13.0)	
Other	4 (1.2)	0		2 (1.3)	2 (1.2)	
Median (range) satisfaction with pain relief	10 (1-10)	7 (1-10)	< 0.001	10 (1-10)	10 (2-10)	> 0.1
Median (range) satisfaction with labour	9 (0-10)	9 (1-10)	> 0.1	9 (1-10)	9 (0-10)	> 0.1

Table 3—*Incidence of backache in responders in three treatment groups. Values are numbers (percentages) (95% confidence intervals)*

Variable	Bupivacaine alone (n = 157)	Opioid with bupivacaine (n = 162)	No epidural (n = 131)
No previous backache (before or during pregnancy)	64 (40.8) (33.1 to 48.5)	79 (48.8) (41.1 to 56.5)	67 (51.1) (42.5 to 59.7)
Backache before pregnancy	28 (17.8) (11.8 to 23.8)	21 (13.0) (7.8 to 18.1)	20 (15.3) (9.1 to 21.4)
Backache during pregnancy	89 (56.7) (48.3 to 63.8)	81 (50) (42.9 to 58.3)	60 (45.8) (36.5 to 53.6)
Long term postpartum backache*	61 (38.9) (31.3 to 46.5)	49 (30.3) (23.2 to 37.4)	40 (30.5) (21.2 to 36.8)
New long term backache	10 (6.4) (3.5 to 11.8)	14 (8.6) (3.8 to 12.2)	9 (6.9) (2.5 to 11.2)

No significant differences between treatment groups. *Factors independently and significantly associated with long term postpartum backache were backache before pregnancy (odds ratio (95% confidence interval) 4.4 (2.4 to 7.9); P=0.0001) and backache during pregnancy (3.7 (2.3 to 5.8); P=0.0001).

Table 4—*Incidence of backache at three months in different demographic and obstetric categories*

	Women who never had backache before (n = 210)		All responders (n = 450)	
	Total	No (%) with backache	Total	No (%) with backache
Demographic characteristic				
Married	130	19 (14.6)	268	86 (32.1)
Single supported	66	12 (18.2)	151	52 (34.4)
Single unsupported	11	2 (18.2)	23	7 (30.4)
Divorced or separated	3	0	8	5 (62.5)
White	145	21 (14.5)	311	98 (31.5)
African	27	6 (22.2)	53	20 (37.7)
West Indian	22	2 (9.1)	53	20 (37.7)
Other	16	4 (25)	33	12 (36.4)
Obstetric characteristic				
Primiparous	154	24 (15.6)	310	92 (29.7)
Multiparous	56	9 (16.1)	140	58 (41.4)
Previous epidural	36	6 (16.7)	80	33 (41.3)
No previous epidural	174	27 (15.5)	370	117 (31.6)
Spontaneous onset of labour	132	17 (12.9)	279	86 (30.8)
Induced labour	78	16 (20.5)	171	64 (37.4)
Labour characteristic				
Augmentation nil:	101	15 (14.9)	214	71 (33.2)
Before epidural	17	2 (11.8)	45	18 (40)
After epidural	82	14 (17.1)	175	57 (32.6)
No epidural	10	2 (20)	16	4 (25)
Pethidine	36	3 (8.3)	78	24 (30.8)
No pethidine	174	30 (17.2)	372	126 (33.9)
Spontaneous delivery	121	22 (18.2)	270	97 (35.9)
Instrumental delivery	63	7 (11.7)	132	40 (30.3)
Caesarean section	23	4 (17.4)	44	12 (27.3)
Other	3	0	4	1 (25)
Perineum intact	64	10 (15.6)	136	45 (33.1)
Perineum not intact	146	23 (15.8)	314	105 (33.4)
Epidural population				
No of recipients	139		319	
No muscle weakness	85	19(22.4)	188	64 (34)
Muscle weakness	54	6 (11.1)	131	46 (35.1)

The χ^2 test was used to examine the association between treatment group and backache before, during, and after pregnancy. The numbers of women reporting antenatal and postnatal symptoms were determined for the entire population and in addition for those who had not reported backache before childbirth.

Women who reported new backache three months after delivery were contacted one year after delivery, either by telephone or by further questionnaire, and asked if they still suffered with backache. Those who did were offered an appointment to assess their backache in more detail.

Table 5—*Demographic and obstetric parameters of women with and without backache at three months. Values are means (SD) unless stated otherwise*

	Women with no history of backache		All responders	
Parameter	**Backache (n = 33)**	**No backache (n = 177)**	**Backache (n = 150)**	**No backache (n = 298)**
Age (years)	28.8 (4.90)	29.7 (5.10)	28.9 (5.39)	28.9 (5.10)
Body mass index (kg/m^2)	25.4 (4.65)	25.0 (4.29)	25.4 (4.66)	25.2 (4.71)
Gestation at delivery (weeks)	39.6 (1.90)	39.8 (1.33)	39.4 (1.71)	39.8 (1.39)
Mean (range) duration of labour (min):				
First stage	320 (25-1125)	430 (18-1075)	375 (20-1125)	423 (18-1200)
Passive second stage	10 (0-120)	15 (0-175)	10 (0-135)	15 (0-175)
Active second stage	36 (2-95)	33 (0-195)	35 (0-193)	33 (0-215)
Weight of baby (g)	3291 (584)	3420 (466)	3364 (534)	3427 (497)
Mean (range) duration of breast feeding (weeks)	10 (0-12)	12 (0-12)	12 (0-12)	12 (0-12)
Epidural characteristic:				
No of recipients	24	115	112	207
Total dose of bupivacaine (mg)	92.4 (35.1)	110 (47.3)	103 (40.9)	110 (48.9)
Duration of infusion (min)	264 (157)	335 (155)	285 (147)	327 (164)

Results

A total of 616 women consented to take part in the study, with no woman refusing to participate. Seventeen women receiving epidural analgesia, however, were excluded from analysis as within one hour of starting the epidural infusion they either delivered spontaneously or required urgent caesarean section. Of the remainder, 200 women received epidurals containing bupivacaine alone, 199 epidurals of low dose bupivacaine with opioid, and 200 women did not receive epidural analgesia.

The response rate to the questionnaire at three months was 75%. It was similar in the two epidural groups (79% and 81%) but was significantly lower among the non-epidural group (66%). Differences between women who did and did not respond to the questionnaire were examined and, after adjustment for other variables, five significant differences between the groups were found (table 1). Women who received epidural analgesia and transcutaneous electrical nerve stimulation, older women, white women, and those who delivered nearer term were more likely to reply than their counterparts.

The demographic and obstetric details of responders are given in table 2, in which the non-epidural group is compared with the whole epidural population, and the two epidural treatment groups are compared with one another. There were significant differences between the epidural and non-epidural groups for marital status, race, onset of labour, oxytocin augmentation, length of labour, type of delivery, and satisfaction with labour. Subsequent analyses took account of these differences. The only difference between the two epidural groups lay in the expected increase in motor block with the larger dose of bupivacaine. There was no difference in the rate of spontaneous delivery between the two epidural groups, despite this difference in motor block.

There was considerable overlap in the reporting of backache before, during, and after pregnancy (fig 1). A total of 150 women (33.3%) reported backache which persisted for at least three months after delivery, and of these, 40 reported that this was a new symptom not present before delivery. When their peripartum notes were examined, however, seven of them had reported antenatal backache, six of whom had received epidural analgesia in labour and one pethidine. This left 33 women with genuine new onset backache. There were no significant differences between the treatment groups in the incidence of new onset backache (table 3). The 95% confidence interval for the difference between new backache in women who received epidural analgesia and those who did not was -4.6% to 5.8%.

Factors associated with postpartum backache were investigated (tables 4 and 5). Confounding effects were adjusted for by performing a forward stepwise logistic regression with the results checked with backwards elimination stepwise logistic regression. Among all the demographic, obstetric, or questionnaire details none other than previous backache, either before or during pregnancy, was significantly linked with the occurrence of backache or development of new backache at three months (foot of table 3). The incidences of any other new long term symptoms after childbirth were too small to test formally for any differences between the treatment groups (table 6).

Further analysis was performed to investigate the recovery rates from previous backache in the two epidural treatment groups. In the plain bupivacaine group 71 women (45.2%) reported backache before or during but not after pregnancy compared with 94 (57.8%) in the low dose bupivacaine with opioid group (difference −12.6%; 95% confidence interval −27.3% to 2%). In the group who did not receive epidural analgesia 62 (47.0%) women reported backache before or during but not after childbirth.

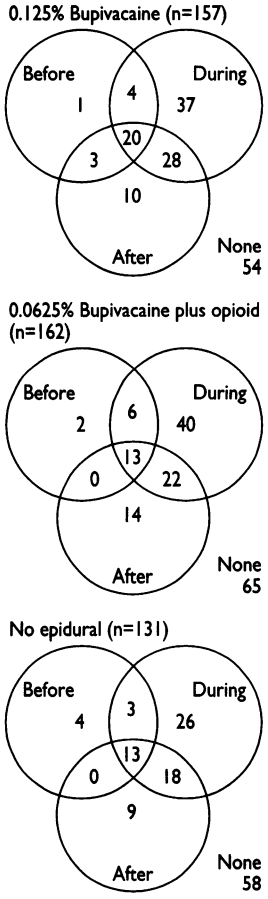

Fig 1—*Venn diagram representing numbers of women experiencing backache before, during, and after pregnancy in the three treatment groups. Percentages and confidence intervals are given in table 3*

Table 6—*Incidence of other new postnatal symptoms in responders who received bupivacaine alone, bupivacaine with opioid, and no epidural. Figures are numbers (percentages) of patients*

Symptom	Bupivacaine alone (n = 157)	Opioid with bupivacaine (n = 162)	No epidural (n = 131)
Headache	5 (3.2)	3 (1.8)	0
Neck ache	6 (3.8)	3 (1.8)	4 (3.1)
Shoulder pain	9 (5.7)	7 (4.3)	5 (3.8)
Paraesthesia in arms	2 (1.3)	4 (2.5)	2 (1.5)
Paraesthesia in legs	4 (2.5)	4 (2.5)	2 (1.5)
Visual problems	4 (2.5)	3 (1.8)	2 (1.5)
Dizziness	9 (5.7)	4 (2.5)	4 (3.1)
Faintness	3 (1.9)	0	1 (0.8)
Chest pain	9 (5.7)	2 (1.2)	1 (0.8)
Abdominal pain	4 (2.5)	7 (4.3)	6 (4.5)
Heartburn	0	1(0.6)	2 (1.5)
Nausea	1(0.6)	1(0.6)	0
Urinary incontinence	6 (3.8)	7 (4.3)	4 (3.1)
Difficulty passing urine	1(0.6)	1(0.6)	0
Perineal pain	8 (5.1)	16 (9.9)	10 (7.6)
Haemorrhoids	7 (4.5)	10 (6.2)	9 (6.8)
Other	6 (3.8)	4 (2.5)	5 (3.8)

Further assessment of the 33 women with new backache was attempted one year after delivery. Twenty three women were contacted either by letter or by telephone with the remaining 10 lost to follow up. Backache had resolved in 14 but persisted in nine (fig 2). The women with persisting backache were offered an outpatient appointment but only five accepted. The four others did not consider the backache severe enough to warrant further assessment. In these four cases an occasional dull ache in the lower back was described, worse after heavy lifting or straining, and relieved by rest. Three women attended the outpatient clinic, all of whom had received epidural analgesia. Backache was diagnosed as postural and not severe in two women. The third had localised tenderness around the epidural insertion site, possibly due to a slowly resolving haematoma. She also had a postural element to her backache. The two others did not come to the clinic, giving no reason for their failure to attend.

Discussion

After the study by MacArthur and colleagues[1] it was widely suggested that epidural analgesia increases the incidence of new long term backache. In their study women who had elective surgery under epidural anaesthesia were not at increased risk of developing new backache. Therefore it was suggested that epidural administration of local anaesthetics during labour caused motor block of the lower back and legs leading to poor posture and immobility. Stressed positions in labour damaged the back resulting in long term backache. This theory, however, has not hitherto been put to the test in a prospective study.

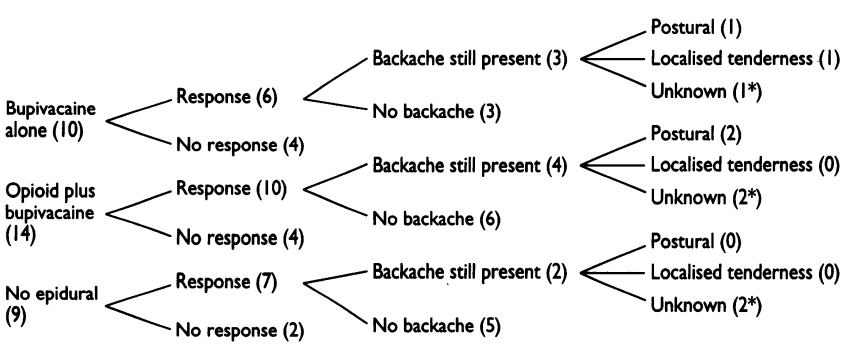

Fig 2—*One year follow up of 33 women reporting new backache at three months. *Five unknown: three women gave histories typical of postural backache but were not willing to attend hospital, and two made appointments for assessment of backache but did not attend*

The obstetric differences between women receiving epidural analgesia and those using other forms of pain relief are predictable. Thus women whose labours were induced, augmented, and of longer duration were more likely to require both instrumental delivery and more effective analgesia which an epidural can provide. Women were not randomised to receive epidural analgesia as such randomisation may be regarded as unethical,[13] principally because there is no equally efficacious alternative with which to compare it. Also those randomised to receive other analgesia such as pethidine, with its effect on delaying gastric emptying, are put at increased risk should they require emergency general anaesthesia.

As in our retrospective study,[2] younger women and those of African origin were less likely to respond to the follow up questionnaire. The higher response rate in the epidural population probably reflects their greater feeling of involvement with the study. In our retrospective inquiries the total number of women reporting backache after childbirth was 29.5%,[2] similar to that in the present study (33.3%). The incidence of new backache was 15.4% retrospectively versus 7.3% prospectively, however, reflecting the different proportions reporting antenatal backache (25.8% retrospectively versus 50.9% prospectively). In the Birmingham study only 9% of women recalled having antenatal backache. The true incidence of backache during pregnancy has previously been shown to be of the order of 50%,[4-7] suggesting that in both retrospective studies[1 2] many women forgot that they had had antenatal backache.

On the basis of previous retrospective data, in which the incidence of new postpartum backache in those who received epidural analgesia was 18.9% compared with 10.5% in those choosing other methods of pain relief,[1] to detect an 8.4% difference in the development of backache at 5% significance with 80% power 277 women would need to be recruited to each group. We recruited a total of 616 during the time available for the study. Unfortunately, 17 women were excluded as they delivered before adequate data had been collected and a further 149 failed to reply to the postal questionnaire, leaving only 450 subjects for the final analysis. The incidence of new backache in this prospective study, 7%, was much less than anticipated, and our study would have been able to detect a difference of 8-9% with 80% power. The largest difference we detected, of 2.2% (95% confidence interval -3.6% to 8.8%) between the low dose bupivacaine with opioid and plain bupivacaine alone groups was not in the expected direction. The confidence limits suggest any clinically important difference is unlikely. The overall incidence of new backache accords with that found prospectively in another group of British mothers.[14]

We may be criticised for recruiting to this study women who suffered backache during pregnancy because they had no opportunity to develop new long term backache. This would have excluded more than half of the childbearing population, and moreover we wished to recruit in an unbiased way before questioning mothers about antenatal symptoms. Thus we were able to record the true incidence of antenatal backache and to assess the extent of amnesia that existed three months later. In the present population, however, antenatal backache was forgotten less commonly than in the retrospective surveys,[1 2] possibly because all women had to remember symptoms for only three months and also because questioning them about these symptoms near delivery may have helped to fix them in their minds. Data from the entire sample were examined by logistic regression to seek all factors that might be associated with postpartum backache. Backache both before and during pregnancy were highly significant predictors for postpartum backache (odds ratio 4.4 and 3.7, respectively), and no other factor was significant.

Hence, although there were significant demographic differences between treatment groups and between responders and non-responders to the questionnaire, none of these differences were factors in the occurrence of postnatal backache.

There can be little doubt that motor block was not a factor in the development of new long term backache, and moreover there was no evidence that epidural analgesia itself leads to an increased incidence of backache. Further evidence against an association between epidurals and new backache has emerged from Queen Charlotte's Hospital[14] and North America. Breen and colleagues from Boston studied over 1000 women prospectively and failed to show an increase in new backache in those who had received epidural analgesia in labour.[15] Also, a group from McGill University, Montreal, studied over 200 women and found no significantly increased risk of backache in women receiving epidural analgesia.[16] While the Queen Charlotte's and the Boston groups used low dose bupivacaine, the Montreal group did not, but ours is the only study to randomise the two types of epidural analgesia.

Of those women reporting backache before and during pregnancy, a higher percentage in the low dose bupivacaine with opioid group than in the plain bupivacaine were free from backache when questioned three months after delivery. This difference did not reach significance.

As in our previous work,[2] we have found that in most cases new long term backache is not severe. Indeed in over 60% of women it had disappeared when they were reassessed one year after delivery, and in others it was not troublesome enough to warrant further investigation.

The incidence of other new long term postnatal symptoms was not significantly increased in women who received epidural analgesia in the present study. Although MacArthur and colleagues demonstrated an increase in various symptoms in women who chose epidural analgesia, this may again reflect the retrospective nature of the study. A prospective study of several thousand women would be required to explore these associations. A relation between epidural analgesia in labour and long term backache is commonly accepted without question in the United Kingdom, and the results of a retrospective survey, widely circulated in the lay press, seemed to confirm this association. Thus for many women backache after epidural analgesia in labour is a self fulfilling prophecy. In a careful prospective study we have found no such association.

It must be hoped that the results from other studies and our own are also widely circulated so that pregnant women may be reassured that there is no prospective evidence linking backache with a particular type of pain relief in labour.

Key messages

- Retrospective surveys have seemed to show a causal relation between epidural analgesia and backache after childbirth
- About half of all women suffer backache during pregnancy, but many forget this when questioned retrospectively
- A prospective study showed that the incidence of new postpartum backache is 7.3
- The use of epidural analgesia in labour had no effect on the incidence of postpartum backache
- In a randomised trial motor block in labour was not associated with an increase the incidence of backache

We thank Caroline Roberts of the physiotherapy department of St Thomas's Hospital for her help in the assessment of postnatal backache.

Funding: RR was supported by a grant from the Sir Jules Thorn Charitable Trust.

Conflict of interest: None.

1 MacArthur C, Lewis M, Knox EG, Crawford JS. Epidural analgesia and long term backache after childbirth. *BMJ* 1990;**301**:9-12.
2 Russell R, Groves P, Taub N, O'Dowd J, Reynolds F. Assessing long term backache after childbirth. *BMJ* 1993;**306**:1299-303.
3 MacArthur C, Lewis M, Knox EG. Investigation of long term problems after obstetric epidural anaesthesia. *BMJ* 1992;**304**:1279-82.
4 Berg G, Hammar M, Moller-Nielsen J, Linden U, Thorblad J. Low back pain during pregnancy. *Obstet Gynecol* 1988;**71**:71-5.
5 Fast A, Shapiro D, Ducommun E, Friedmann LW, Bouklas T, Floman Y. Low back pain in pregnancy. *Spine* 1987;**12**:368-71.
6 Ostgaard HC, Andersson GBJ. Postpartum low-back pain. *Spine* 1992;**17**:53-5.
7 Mantle MJ, Greenwood RM, Currey HLF. Backache in pregnancy. *Rheumatology and Rehabilitation* 1977;**16**:95-101.
8 Russell R, Quinlan J, Reynolds F. Motor block during epidural infusion for nulliparous women in labour. A randomized double blind study of plain bupivacaine and low dose bupivacaine with fentanyl. *International Journal of Obstetric Anesthesia* 1995;**4**:82-8.
9 Russell R, Reynolds F. Epidural infusions for nulliparous women in labour. A randomised double blind comparison of fentanyl/bupivacaine and sufentanil/bupivacaine. *Anaesthesia* 1993;**48**:856-61.
10 Phillips GH. Continuous infusion epidural analgesia in labor: effect of adding sufentanil to 0.125% bupivacaine. *Anesth Analg* 1988;**67**:462-5.
11 Van Zundert A, Vaes L, Soetens M, De Vel M, Maesen F. Measuring motor block during lumbar epidural analgesia for vaginal delivery. *Obstetric Anesthesia Digest* 1984;**4**:31-4.
12 Russell R, Reynolds F. Epidural infusions of low-dose bupivacaine and opioid in labour: does reducing motor block increase the spontaneous delivery rate? *Anaesthesia* 1996;**51**:266-73.
13 Reynolds F, Dewan D, Morgan B. Ethics and clinical research in obstetric anaesthesia (letter). *Lancet* 1992;**339**:1234-5.
14 Patel M, Fernando R, Gill P, Urquhart J, Morgan B. A prospective study of long-term backache after childbirth in primigravidae—the effect of ambulatory epidural analgesia during labour (abstract). *International Journal of Obstetric Anesthesia* 1995;**4**:187.
15 Breen TW, Ransil BJ, Groves PA, Oriol NE. Factors associated with back pain after childbirth. *Anesthesiology* 1994;**81**:29-34.
16 Macarthur A, Macarthur C, Weeks S. Epidural anaesthesia and low back pain after delivery:a prospective cohort study. *BMJ* 1995;**311**:1336-9.

(Accepted 29 February 1996)

Do you know anyone with Refsums disease?

Refsums disease is a recessive genetic disorder in which the patient is unable to break down phytanic acid in the body. The main manifestations are retinitis pigmentosa and peripheral neuropathy, although other problems can occur such as anosmia, ichthyosis, deafness, ataxia, cardiac arrhythmias, and, less commonly, congenital abnormalities.

The disease is rare so diagnosis may be difficult. I was eventually diagnosed as having the disease in 1994 when I was 27, although I had been ill since I was 14 and had been diagnosed as having first rheumatoid arthritis and then a psychiatric disorder.

There may be other people with Refsums disease who have had difficulties being diagnosed and getting the appropriate help. I am planning to produce an information booklet and to set up a network of sufferers from the disease. If you know anyone who may be interested please contact me in writing at the following address: Ms Sandra Ruckley, RNIB Redhill College, Philanthropic Road, Redhill, Surrey RH1 4DG.

We welcome filler articles of up to 600 words on topics such as *A memorable patient, A paper that changed my practice,* or *My most unfortunate mistake* or any other piece conveying instruction, pathos, or humour. If possible the article should be supplied on a disk.