ORIGINAL PROF-1050

EPIDURAL ANALGESIA;
ITS ASSOCIATED WITH LONG TERM BACKACHE

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ABSTRACT ... farooq_ahrana@yahoo.com **Objective:** To find out the association of epidural analgesia during labour with long term backache. **Design:** A randomized controlled trial. **Setting:** Combined Military Hospital Rawalpindi. **Period:** March 2002 to Feb 2003. **Material and Methods:** 100 randomized to epidural group and 100 randomized to non-epidural group. In the follow up study 92 women were from the epidural group and 89 from the non-epidural group. **Results:** There were no significant differences between groups in demographic details or other key characteristics. There were no significant differences in the onset or duration of low back pain. There were no differences in self reported measures of disability in activities of daily living and no significant differences in measurements of spinal mobility. **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.

Key words: Epidural analgesia, Spinal mobility, Visual analog scale (VAS), McGill Pain Questionnaire (MPQ), Fingertip to floor method

INTRODUCTION

A needle that passes through skin, subcutaneous tissues, muscle, and ligaments can result in a backache. A localized inflammatory response with or without reflex muscle spasm may be responsible. Short term backache is a common problem in the first week after delivery It should be noted that up to 25 -30% of patients receiving only general anesthesia also complain of backache postoperatively. The soreness or ache is usually mild and self limited, It may last for a number of weeks. Although backache is usually benign, remember that it may also be an important clinical sign of the much more serious complications, such as epidural hematoma and abscess. Not much is known on long term effects of epidural form of pain relief, there have been several studies into back pain and epidural analgesia. They have found an unexpected association between the use of epidural pain relief for labour and long term low back pain (lasting more than three months). To make it standardized with international studies same general health questionnaire as MacArthur et al was used, which incorporated questions on low back pain. However, this did not allow an objective assessment of any back pain in terms of severity or the interference with mobility and

activities of daily living. Long term differences in self reported and objective measures of low back pain between women who received epidural pain relief and those who received other forms of pain relief during labour were also investigated.

MATERIAL AND METHODS

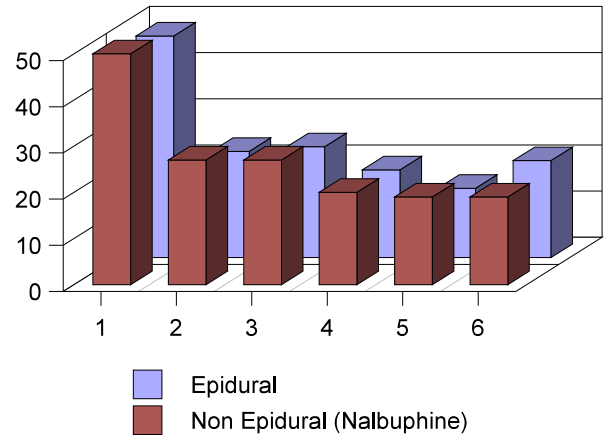
A randomized controlled trial of epidural and non-epidural analgesia in labour was undertaken, the immediate effects of the different forms of analgesia on progress of labour, satisfaction, and health after childbirth were studied. 200 primigravidas with a cephalic presentation at term were selected for study. All these women were invited to participate in this follow up study (100 from the epidural group and 100 from the non-epidural group). The mean time interval from delivery to interview was 12 months. Visual analog scale (VAS) and the McGill Pain Questionnaire (MPQ) were used to assess the severity of pain. Self reported low back pain, disability, and limitation of movement assessed through one to one interviews with physiotherapist, questionnaire on back pain and disability, physical measurements of spinal mobility were used as an assessment criteria. The range of movements included straight leg raising, spinal flexion and extension, lateral flexion, and ability to sit up. Additional measurements included the fingertip to floor method of assessing forward bending. Before the study started the assessment was standardized and training was carried out to reduce intra observer variability. The study continued from March 2002 to Feb 2003. With 100 women in each group it was calculated that it could be 85% confident of detecting (at P=0.05) a clinically significant 6% difference in objective measurements of low back pain in one year. Data was analyzed with an intention to treat.

RESULTS

The incidence of self reported low back pain during or after pregnancy is high. Back pain was common in both groups and more women reported acute severe pain in the epidural group, but pain lasting more than one year, persistent pain, and recent pain were all more common among women who had not an epidural. There were no significant differences between the groups in any of the measurements of mobility, physical measurements of spinal mobility self reported low back pain, disability, and limitation of movement.

Table-I. Assessment Criteria
Self reported low back pain,
Disability and limitation of movement assessed through one to one interviews with physiotherapist,
Questionnaire on back pain and disability,
Physical measurement of spinal mobility.

Fig-1.



1. Backache 2. Headache 3. Neckache
4. Urinary in continence 5. Arm symptoms
6. Leg symptoms

There were also no differences in the range of movements including straight leg raising, spinal flexion and extension, lateral flexion, and ability to sit up. Of the180 women who reported backache, 126(70%) had it for over a year. A significant association was found between backache and epidural anaesthesia (relative risk = 1.8); 16 of 92 women (17%) who had an epidural anaesthesia reported this symptom, compared with 12 of the 96 women (12%) who had not an epidural anaesthesia.

Table-II. Epidural Analgesia and Backache					
Symptoms	**Epidural n/total n**	**% Age**	**Non Epidural (Nalbuphine) n/total n**	**% Age**	**P-value**
Backache	48/100	48	50/100	50	0.6
Headache	22/97	23	26/98	27	0.3
Neckache	23/95	24	26/96	27	0.5
Urinary Incontinence	17/91	19	18/90	20	0.8
Arm Symptoms	13/85	15	17/89	19	0.2
Leg Symptoms	20/95	21	17/91	19	0.6

Table-III. Incidence of new symptoms 6 months postpartum. For each symptom, the table shows its occurrence in patients not suffering the particular problem antepartum. Hence the variable numbers of subjects in the epidural and non epidural groups within the table. Summary statistics are frequencies (%) *P-values*

Symptoms	**Epidural n/total n**	**% Age**	**Non Epidural (Nalbuphine) n/total n**	**% Age**	**P-value**
Backache	27/92	29	24/87	28	0.9
Headache	10/82	12	11/92	12	1.0
Neckache	12/82	15	15/87	17	0.6
Urinary Incontinence	11/88	12	13/91	14	0.5
Arm Symptoms	8/78	10	10/84	12	0.5
Leg Symptoms	11/92	12	9/90	10	0.7

DISCUSSION

There was a popular notion that “epidural cause long term backache," 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. Previously it was suggested that about 18% of women who received epidural analgesia had long term low back pain compared with 12% of those who used other forms of pain relief. In this controlled comparison of the long term effects of epidural and non-epidural analgesia (Nalbuphine) it was found there is no significant differences in self reported low back pain or disability and in objective measurements of spinal mobility during year. The validity of these findings is affirmed by the randomized study design, the objective measures of outcome, and the high follow up rate. Factors associated with persistent pain were the presence of low back pain before or during pregnancy, physically heavy work, and multiple pregnancies.

Mac Arthur and coworkers reviewed six comparative studies which examined the association between epidural analgesia and postpartum low back pain. Three studies that showed a significant effect were all retrospective, while the prospective surveys showed no significant differences. This important difference in findings illustrates the potential for bias in retrospective studies and similarly supports the value of carefully designed prospective studies, even if it is not feasible to generate a randomized cohort of patients. However, it was generally found that reported rates of low back pain were high during pregnancy and at long term follow up in

both groups of women.

Although this study detected an absolute difference of 5% in the incidence of back pain, most of the similar findings in each group means that in future ccontrolled comparisons would require further research in the form of much more enhanced number of participants.

CONCLUSION

After childbirth there are no differences in the incidence of long term low back pain, disability, or movement restriction between women who receive epidural pain relief and women who receive other forms of pain relief. Motor block resulting from epidural local anaesthetic administration was not a significant factor in the development of backache. The relation between backache and epidural anaesthesia is probably causal. It seems to result from a combination of effective analgesia and stressed posture during labour.

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