No increased risk of caesarean or instrumental delivery for nulliparous women who have epidural analgesia early in (term) labour.

Siranda Torvaldsen,1 Christine L Roberts2

1. School of Public Health and Community Medicine, University of New South Wales, Sydney, New South Wales, Australia
2. Department of Obstetrics and Gynaecology, University of Sydney, Sydney, New South Wales, Australia


Context

Wassen and colleagues have published an article on a topic of great practical importance: Does epidural analgesia (EA) given early in labour (≤3 cm cervical dilatation) increase the risk of instrumental delivery, compared with EA administered later in labour? This is important because EA is the most effective labour analgesia, and, if the timing of its administration is not associated with any adverse consequences, then it should not be denied to women in early labour.

Women who have EA during their labour, compared with women who have other forms of analgesia, are at increased risk of instrumental delivery (RR 1.38, 95% CI 1.24 to 1.53).1 Instrumental deliveries are associated with increased risks to women of vaginal/perineal trauma and anal sphincter damage, which may in turn lead to urinary incontinence, bowel and sexual problems. Many women will choose EA in spite of this risk. The challenge has been to find management strategies for labouring women with EA that reduce the risk of instrumental delivery. Two such strategies involve delaying the administration of EA and
discontinuing EA late in labour. Systematic reviews of both these interventions show no reduction in the risk of instrumental delivery but an increase in inadequate pain relief, something women are unlikely to find acceptable when unaccompanied by any benefit. Wassen and colleagues suggest that the results from the most recent review of the effects of timing of EA may not be convincing, with one of the reasons being ‘a too broad definition’ of early labour (<4 to 5 cm cervical dilatation). Hence, the purpose of their review was to determine whether there was any increased risk of instrumental delivery when EA was commenced when cervical dilatation was ≤3 cm.

**Methods**

The systematic review was limited to studies of nulliparous women with a gestational age of at least 36 weeks, with a singleton in vertex presentation, and where early EA (at ≤3 cm dilatation) was compared with late EA (at ≥4 cm cervical dilatation). Randomised controlled trials (RCTs) and cohort studies were eligible. The primary outcome was mode of delivery: instrumental vaginal delivery or caesarean delivery. The authors did not list any secondary outcomes. Two reviewers independently performed the literature search, screened abstracts and articles, assessed the methodological quality of the articles (Jadad criteria) and extracted data from the articles.

**Findings**

Five RCTs (n=14 836) were included in the meta-analyses. The single cohort study was omitted because of heterogeneity. The allocation method was deemed to be not random in one RCT, and, in this study and one other, no indication was given of the rate of withdrawals, crossover or dropouts. Three trials were among women with spontaneous labour, one with labour inductions and two with spontaneous and induced labour. The main finding was
delaying EA did not result in an decreased risk of instrumental delivery (RR 0.96, 95% CI 0.89 to 1.05) or caesarean delivery (RR 1.02, 95% CI 0.96 to 1.08). The only outcome presented in a forest plot was the rate of caesarean delivery. From this forest plot, we can see that the three higher quality trials have a combined weight of 98.4%.

Commentary

Strengths of this systematic review include a focused clinical question, the likelihood that all relevant studies were included, that the validity of the included studies was appraised and that the heterogeneity between studies was assessed.4

This review concludes that there is no evidence to suggest that giving EA to women early in labour increases the risk of instrumental delivery. This conclusion remains valid in spite of the inclusion of lower quality trials, which contributed very little because of their relatively small sizes. The authors did not consider other important outcomes, particularly maternal outcomes relating to their experience of labour. The three higher quality trials included in the review, which used systemic analgesia initially for those randomised to delayed EA, reported either increased median pain scores or lower satisfaction with analgesia among those randomised to delayed EA.5–7

Competing interests None.

References


