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[Intervention Review]

Maternal positions and mobility during first stage labour

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ABSTRACT

Background

It is more common for women in both high- and low-income countries giving birth in health facilities, to labour in bed. There is no evidence that this is associated with any advantage for women or babies, although it may be more convenient for staff. Observational studies have suggested that if women lie on their backs during labour this may have adverse effects on uterine contractions and impede progress in labour, and in some women reduce placental blood flow.

Objectives

To assess the effects of encouraging women to assume different upright positions (including walking, sitting, standing and kneeling) versus recumbent positions (supine, semi-recumbent and lateral) for women in the first stage of labour on duration of labour, type of birth and other important outcomes for mothers and babies.

Search methods

We searched the Cochrane Pregnancy and Childbirth Group's Trials Register (31 January 2013).

Selection criteria

Randomised and quasi-randomised trials comparing women randomised to upright versus recumbent positions in the first stage of labour.

Data collection and analysis

We used methods described in the *Cochrane Handbook for Systematic Reviews of Interventions* for carrying out data collection, assessing study quality and analysing results. Two review authors independently evaluated methodological quality and extracted data for each study. We sought additional information from trial authors as required. We used random-effects analysis for comparisons in which high heterogeneity was present. We reported results using the average risk ratio (RR) for categorical data and mean difference (MD) for continuous data.

Main results

Results should be interpreted with caution as the methodological quality of the 25 included trials (5218 women) was variable.

For Comparison 1: Upright and ambulant positions versus recumbent positions and bed care, the first stage of labour was approximately one hour and 22 minutes shorter for women randomised to upright as opposed to recumbent positions (average MD -1.36, 95% confidence interval (CI) -2.22 to -0.51; 15 studies, 2503 women; random-effects, $T^2 = 2.39$, $Chi^2 = 203.55$, df = 14, ($P < 0.00001$), $I^2 = 93\%$). Women who were upright were also less likely to have caesarean section (RR 0.71, 95% CI 0.54 to 0.94; 14 studies, 2682 women) and less likely to have an epidural (RR 0.81, 95% CI 0.66 to 0.99, nine studies, 2107 women; random-effects, $T^2 = 0.02$, $I^2 = 61\%$). Babies of mothers who were upright were less likely to be admitted to the neonatal intensive care unit, however this was based on one trial (RR 0.20, 95% CI 0.04 to 0.89, one study, 200 women). There were no significant differences between groups for other outcomes including duration of the second stage of labour, or other outcomes related to the well being of mothers and babies.

For Comparison 2: Upright and ambulant positions versus recumbent positions and bed care (with epidural: all women), there were no significant differences between groups for outcomes including duration of the second stage of labour, or other outcomes related to the well being of mothers and babies.

Authors' conclusions

There is clear and important evidence that walking and upright positions in the first stage of labour reduces the duration of labour, the risk of caesarean birth, the need for epidural, and does not seem to be associated with increased intervention or negative effects on mothers' and babies' well being. Given the great heterogeneity and high performance bias of study situations, better quality trials are still required to confirm with any confidence the true risks and benefits of upright and mobile positions compared with recumbent positions for all women. Based on the current findings, we recommend that women in low-risk labour should be informed of the benefits of upright positions, and encouraged and assisted to assume whatever positions they choose.

PLAIN LANGUAGE SUMMARY

Mothers' position during the first stage of labour

There is little doubt that women should be encouraged to utilise positions which give them the greatest comfort, control and benefit during first stage labour. As women in most western societies now lie in bed for the entire duration of their labour, it is important that they understand the risks and benefits of the positions they choose.

This review included 25 studies (involving 5218 women). Although many studies were not of high quality, and most of the women were low risk, they did show that the first stage of labour may be approximately one hour and twenty minutes shorter for women who are upright or walk around. As every contraction is potentially painful, and prolonged labour can be an overwhelming and exhausting process resulting in an increased need for medical intervention, this is a meaningful outcome for women. Indeed other important outcomes for women who were upright and mobile compared with lying down in bed included a reduction in the risk of caesarean birth, less use of epidural as a method of pain relief, and less chance of their babies being admitted to the neonatal unit. More research of better quality is still needed to validate these results for all women in labour. However, based on the results of this review we recommend that wherever possible, women should be encouraged and supported to use upright and mobile positions of their choice during first stage labour, as this may enhance the progress of their labour and may lead to better outcomes for themselves and their babies.