

ABSTRACT

Background:

Induction of labour is common, and cesarean delivery is regarded as its major complication. We conducted a systematic review and meta-analysis to investigate whether the risk of cesarean delivery is higher or lower following labour induction compared with expectant management.

Methods:

We searched 6 electronic databases for relevant articles published through April 2012 to identify randomized controlled trials (RCTs) in which labour induction was compared with placebo or expectant management among women with a viable singleton pregnancy. We assessed risk of bias and obtained data on rates of cesarean delivery. We used regression analysis techniques to explore the effect of patient characteristics, induction methods and study quality on risk of cesarean delivery.

Results:

We identified 157 eligible RCTs ($n = 31\,085$). Overall, the risk of cesarean delivery was 12% lower with labour induction than with expectant management (pooled relative risk [RR] 0.88, 95% confidence interval [CI] 0.84–0.93; $I^2 = 0\%$). The effect was significant in term and post-term gestations but not in preterm gestations. Meta-regression analysis showed that initial cervical score, indication for induction and method of induction did not alter the main result. There was a reduced risk of fetal death (RR 0.50, 95% CI 0.25–0.99; $I^2 = 0\%$) and admission to a neonatal intensive care unit (RR 0.86, 95% CI 0.79–0.94), and no impact on maternal death (RR 1.00, 95% CI 0.10–9.57; $I^2 = 0\%$) with labour induction.