

Alfirevic Z, Weeks A. Oral misoprostol for induction of labour. *Cochrane Database of Systematic Reviews* 2000, Issue 4. Art. No.: CD001338. DOI: 10.1002/14651858.CD001338.pub2

<http://www.cochrane.org/reviews/en/ab001338.html>

Abstract

Background

Misoprostol is a synthetic prostaglandin that can be given orally or vaginally. In most countries misoprostol has not been licensed for use in pregnancy, but its unlicensed use is common because misoprostol is cheap, stable at room temperature and effective in causing uterine contractions. Oral use of misoprostol may be convenient, but high doses could cause uterine hyperstimulation and uterine rupture which may be life-threatening for both mother and fetus.

Objectives

To assess the effectiveness and safety of oral misoprostol used for labour induction in women with a viable fetus in the third trimester of pregnancy.

Search strategy

We searched the Cochrane Pregnancy and Childbirth Group Trials Register (January 2005).

Selection criteria

Randomised trials comparing oral misoprostol versus other methods, placebo or no treatment, given to women with a viable fetus for labour induction.

Data collection and analysis

Three authors independently assessed trial quality and extracted data, using centrally-designed data sheets.

Main results

Forty-one trials (8606 participants) were included. In four trials comparing oral misoprostol with placebo (474 participants), women using oral misoprostol were less likely to have long labours (relative risk (RR) 0.16, 95% confidence interval (CI) 0.05 to 0.49), needed less oxytocin (RR 0.32, 95% CI 0.24 to 0.43) and had a lower caesarean section rate (RR 0.62, 95% CI 0.40 to 0.96).

In nine trials comparing oral misoprostol with vaginal dinoprostone (2627 participants), women given oral misoprostol were less likely to need a caesarean section, but this reduction reached statistical significance only in the subgroup with intact membranes (RR 0.78, 95% CI 0.66 to 0.94). Uterine hyperstimulation was more common after oral misoprostol (RR 1.63, 95% CI 1.09 to 2.44) although this was not associated with any adverse fetal events.

Seven trials (1017 participants) compared oral misoprostol with intravenous oxytocin. The only difference between the groups was an increase in meconium-stained liquor in women with ruptured membranes following administration of oral misoprostol (RR 1.72, 95% 1.08 to 2.74).

Sixteen trials (3645 participants) compared oral and vaginal misoprostol and found no difference in the primary outcomes. There was less uterine hyperstimulation without fetal heart rate changes in those given oral misoprostol (RR 0.37, 95% 0.23 to 0.59). Oral misoprostol was associated with increased need for oxytocin augmentation (RR 1.28, 95% 1.11 to 1.48) and more meconium-stained liquor (RR 1.27, 1.01 to 1.60).

Authors' conclusions

Oral misoprostol appears to be more effective than placebo and at least as effective as vaginal dinoprostone. However, there remain questions about its safety because of a relatively high rate of uterine hyperstimulation and the lack of appropriate dose ranging studies. In countries where misoprostol remains unlicensed for the induction of labour, many practitioners will prefer the legal protection of using a licensed product like dinoprostone. There is no evidence that misoprostol given orally is inferior to the vaginal route and has lower rates of hyperstimulation. If misoprostol is used orally, the dose should not exceed 50 mcg.