MISOPROSTOL

FOR THE

INDUCTION OF LABOUR AT TERM

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GLOSSARY OF TERMS

PG	prostaglandin
HPMC	hydroxy propyl methyl cellulose
HPLC	high pressure liquid chromatography
RIA	radio immune assay
mg	milligrams
mcg	micrograms
mL	millilitres
RCT	randomised controlled trial
RR	relative risk
OR	odds ratio
NNTH	number needed to treat to harm
95% CI	95% confidence intervals
IOL	induction of labour
GA	gestational age
ARM	artificial rupture of membranes
SROM	spontaneous rupture of membranes
PROM	premature rupture of membranes
PE	pre-eclampsia
HT	hypertension
IUGR	intra-uterine growth restriction
APH	antepartum haemorrhage
CTG	cardiotocograph
MSL	meconium stained liquor
EDB	epidural block
NVD	normal vaginal delivery
CS	caesarean section
PPH	postpartum haemorrhage
NICU	neonatal intensive care unit

ABSTRACT

Background:

The aims of this randomised, double blind, placebo controlled trial were to compare vaginal PGE_2 gel with oral misoprostol in the induction of labour at term.

Methods:

Women randomised to the oral misoprostol group received 20mcg oral misoprostol solution at two hourly intervals and placebo vaginal gel, and those in the vaginal prostaglandin group received vaginal PGE_2 gel at six hourly intervals and oral placebo solution.

The primary outcome measures were vaginal birth not achieved in 24 hours, uterine hyperstimulation with associated fetal heart rate changes, and caesarean section.

Women were asked about their preferences for care, and a cost comparison was performed for the two methods of induction of labour. A nested randomised trial compared health outcomes for the woman and her infant related to morning or evening admission for commencing induction of labour.

Results:

A total of 741 women were randomised, 365 to the misoprostol group and 376 to the vaginal PGE_2 group.

There were no differences between women in the oral misoprostol group and women in the vaginal PGE_2 group, for the outcomes vaginal birth not achieved in 24 hours (Misoprostol 168/365 (46.0%) versus PGE_2 155/376 (41.2%); RR 1.12 95% CI 0.95-1.32; p=0.134), caesarean section (Misoprostol 83/365 (22.7%) versus PGE_2 100/376 (26.6%); RR 0.82 95% CI 0.64-1.06; p=0.127), or uterine hyperstimulation with fetal

heart rate changes (Misoprostol 3/365 (0.8%) versus PGE_2 6/376 1.6%); RR 0.55 95% CI 0.14-2.21; p=0.401).

Women in the misoprostol group were more likely to indicate that they "liked everything" associated with their labour and birth experience compared with women in the vaginal PGE_2 group (Misoprostol 126/362 (34.8%) versus PGE_2 103/373 (27.6%); RR 1.26; 95% CI 1.02-1.57; p=0.036).

There were no differences in the primary outcomes when considering morning or evening admission to commence induction.

The use of misoprostol was associated with a saving of $110.83 per woman induced.

Conclusions:

The use of oral misoprostol in induction of labour does not lead to poorer health outcomes for women or their infants, women express greater satisfaction with their labour and birth experience, and with misoprostol induction there is a cost saving to the institution.

DECLARATION

This work contains no material which has been accepted for the award of any other degree or diploma in any other university or tertiary institution, and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

I give consent to a copy of my thesis, when deposited in the University Library, being available for loan and photocopy.

Jodie Dodd
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AUTHOR'S CONTRIBUTION

I have been responsible for the development of the original protocols, submission of these protocols to Research and Ethics Committees, and obtaining funding for the project. I have devised the information sheets and data sheets, and have coordinated in-service education sessions for midwifery and medical staff. I have been involved in the preparation of treatment packs, recruitment at the Women's and Children's Hospital, data collection at that site, checking of all data forms and data entry. I have received statistical advice and software programme assistance from Kristyn Willson, but the interpretation and any errors therein are my responsibility.