ORIGINAL RESEARCH PAPER

Gynaecology

A COMPARATIE STUDY OF ORAL MIFEPRISTONE AND ENDOCERVICAL PGE2 GEL AS PREINDUCTION CERVICAL RIPENING AGENT IN PARTURITION.

KEY WORDS: Oral mifepristone ,Endocervical pge2 gel & Induction

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ABSTRACT

BACKGROUND:
Human parturition has been termed 'labour' in recognition of the hard work that the parturient as well as the uterine myometrium have to perform in order to deliver the fetus.Labour refers to the onset of effective uterine contractions leading to progressive effacement and dilatation of the cervix resulting in the expulsion of the fetus, placenta and the membranes.According to Turnbull (1976)" The spontaneous onset of labour is a robust and effective mechanism.. And should be given to operate on its own. We should only induce labour when we are sure that we can do better.

MATERIALS AND METHODS:
The comparative study done to compare the efficacy of oral mifepristone and endocervical PGE2 gel as preinduction cervical ripening agents in term gestation and prolonged pregnancies was done in uncomplicated antenatal women who had clear indication for induction of labour, admitted in antenatal ward and Labour ward at Government Kilpauk Medical College Hospital, Chennai. Total number of samples 100.
50 antenatal women received oral mifepristone 200 mg and 50 women received endocervical PGE2 gel 0.5 mg.

RESULTS:
Mothers in both groups had Bishop score of 0 to 3 at the start of the study. 90% had favourable Bishop score in mifepristone group whereas only 56 % in PGE2 get group. Oxytocin augmentation not needed in 26% in mifipristone group who had vaginal delivery whereas all mothers who had vaginal delivery in PGE2 gel group required oxytocin.The outcome of induction in this study reveals that the mifepristone was successful in 88% in achieving vaginal delivery whereas PGE2 gel group was successful in 76%.

CONCLUSION:
This study reveals that oral mifepristone is very safe and an effective drug for pre induction cervical ripening. It has an added advantage of ease of administration, better patient compliance and acceptance, reduced oxytocin requirement, shorter duration of II, III stages of labour, less blood loss with an overall success rate of 88%.

Introduction:

Human parturition has been termed 'labour' in recognition of the hard work that the parturient as well as the uterine myometrium have to perform in order to deliver the fetus.Labour refers to the onset of effective uterine contractions leading to progressive effacement and dilatation of the cervix resulting in the expulsion of the fetus, placenta and the membranes. According to Turnbull (1976)" The spontaneous onset of labour is a robust and effective mechanism.. And should be given to operate on its own. We should only induce labour when we are sure that we can do better.

The present day Obstetrics, calls for induction for a myriad of Obstetrical, medical and fetal indications, that include valid indications which include emergency situations like premature rupture of membranes with chorioamnionitis, severe preeclampsia etc., to several relative indications which may amount to or approximate an elective induction such as a residence at an appreciable distance from an obstetric facility or history of rapid labour in the previous pregnancy.

Compromise to maternal longevity, accounts for the majority of indications for induction of Labour, while the wide diversity of fetal indications are most often not compromising to their survival or morbidity. Favourability of the cervix is a need for labour induction. Research in this direction has helped in the development of various methods to ripen the cervix prior to uterine contractions. The discovery of prostaglandins, and lately the antiprogesterones, have made labour induction at the disposal of the obstetrician, enabling the delivery of the patient as and when required, thus allowing a carefully planned active management, and in bringing down the trauma of a prolonged or protracted and painful labour for the patient, to give her a healthy baby without compromising her health.

AIMS AND OBJECTIVES:

1. To compare the efficacy and safety of oral mifepristone, and endocervical PGE2 gel for preinduction cervical ripening in term pregnancies and prolonged pregnancies.
2. To evaluate the effect of these drugs on parturition and neonatal outcome.
3. To critically evaluate the effect of these drugs on primi gravid and multigravida.

MATERIALS AND METHODS:

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50 antenatal women received oral mifepristone 200 mg and 50 women received endocervical PGE2 gel 0.5 mg.
Inclusion criteria:

1. Singleton pregnancy in cephalic presentation.
2. Post dated uncomplicated pregnancy.
3. Term uncomplicated pregnancies with unfavourable cervix.(Bishop score <4).
4. Intra uterine fetal death.
5. Congenitally anomalous babies.
6. Term or post term pregnancies with no contraindications for vaginal delivery.

7. No contraindications for prostaglandins or mifepristone.
8. Primigravida less than 35 years and uncomplicated multigravida up to three pregnancies.
9. Intact membranes during the time of induction.

Exclusion criteria:

1. Premature rupture of membranes.
2. Malpresentations.
3. Cephalopelvic disproportion.
4. Bad obstetric history or history of previous abortions.
5. Previous history of caesarean section or any uterine surgery.
6. Associated medical complications.
7. Multiple pregnancy.
8. Elderly primigravida(age >35 years).
9. Oligohydramnios.
10. Rh Negative mother.
11. Placental complications like abruption or placenta praevia.
12. IUGR
13. Parity >3
14. Active herpes infection.
15. Contra indication for prostaglandins.
16. Chorioamnionitis.
17. Any febrile morbidity.

Treatment Schedule:

Group:1

50 Pregnant women were given tablet mifepristone 200 mg orally on day 1. They were observed for maternal vitals., uterine activity bleeding or draining pv and fetal heart rate. After wait period of 24 hours or when the Bishop score was ≥6,when the cervical dilatation was >2cm, or when the membranes ruptured or when the patient was well in labour whichever is earlier labour was accelerated with oxytocin drip.

Group:2

50 Pregnant women pregnant were instilled endocervical PGE2 gel 0.5 mg on day 1. They were observed for maternal vitals, uterine activity, bleeding or draining PV and fetal heart rate. After the wait period of 6 hours or when the Bishop score was ≥6, when the cervical dilatation was >2 cm, or when the mem branes ruptured or when the patient was well in labour whichever is earlier labour was accelerated with oxytocin drip.

Results and Discussion:

1. Mothers in both groups had Bishop score of 0 to 3 at the start of the study. 90% had favourable Bishop score in mifepristone group whereas only 56 % in PGE2 get group.
2. Oxytocin augmentation not needed in 26% in mifipristone group who had vaginal delivery whereas all mothers who had vaginal delivery in PGE2 gel group required oxytocin.
3. The outcome of induction in this study reveals that the mifepristone was successful in 88% in achieving vaginal delivery whereas PGE2 gel group was successful in 76%.
4. Duration of II and III stage of labour shorter in mifepristone group.
5. Cesarean section rate was 12% in mifepristone group whereas 24% in PGE2 gel group.
6. MEAN BLOOD LOSS:

BLOOD LOSS	GROUP I-MIFEPRISTONE	GROUP-II PGE2 GEL	P value
Mean Blood loss(ml)	248	368	=0.03 Significant.
Standard Deviation	160.66	222.63	

Blood loss was less in mifepristone group.

7. Neonatal complications and neonatal admissions were lesser in mifepristone group.
8. Drug administration to delivery interval shorter with PGE2 group.
9. Maternal complications were similar in both groups.

Conclusion:

This study reveals that oral mifepristone is very safe and an effective drug for pre induction cervical ripening. It has an added advantage of ease of administration, better patient compliance and acceptance, reduced oxytocin requirement, shorter duration of II, III stages of labour, less blood loss with an overall success rate of 88%.The drug has no untoward side effects on uterine contraction and no major maternal complications. This drug has safe neonatal outcome.

This drug is more effective in multigravida when compared to primigravida. Hence mifepristone offers advantages over PGE2 gel which is currently used for preinduction cervical ripening.

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