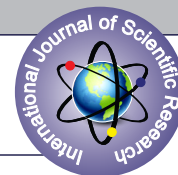


# TO DETERMINE THE EFFICACY AND SAFETY OF MIFEPRISTONE USE FOR CERVICAL RIPENING AND INDUCTION OF LABOUR VS EXPECTANT MANAGEMENT IN TERM AND POST TERM PREGNANCY IN NMCH PATNA, BIHAR



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## ABSTRACT

**Background :** To study the effect of mifepristone in cervical ripening and induction of labour to facilitate normal vaginal delivery.

**Aims and objectives:** This study was done on use of mifepristone for pre induction cervical ripening and labour induction in terms of safety, efficacy and fetal maternal outcome.

**Material and method:** 100 women near term and post term pregnancy with poor bishop score less than 4 were randomised in study group and 100 women were kept in control group (expectant management) and augmentation was done in both groups after improvement in Bishop's score.

**Observation and result:** preinduction cervical ripening was successful in 76% of patients receiving mifepristone. Induction delivery interval was reduced and vaginal delivery was more in mifepristone group.

**Conclusion:** Mifepristone can be used for pre induction cervical ripening in term and post term pregnancy with reduced induction delivery interval and good fetal maternal outcome.

## KEYWORDS

Mifepristone, Bishop score, cervical ripening, induction of labour.

## INTRODUCTION

Induction of labour in cases of term and post term pregnancies depend on Bishop score. If the cervix is primed before induction of labour chances of vaginal delivery will increase. Mifepristone (RU486) is a derivative of synthetic progestin norethindrone with antiprogesterone activity. Mifepristone completely binds to the progesterone receptor resulting in inhibition of the effect of endogenous and exogenous progesterone. Mifepristone by inhibiting progesterone activity promotes uterine contraction and by increasing the sensitivity of uterus to the action of prostaglandins, softens and dilates the cervix thus increasing the bishop score and inducing labour.

This study was undertaken to evaluate the efficacy and safety of mifepristone in preinduction cervical ripening and induction delivery interval compared to expectant management in term and post term pregnancy.

## MATERIAL AND METHOD

This study was undertaken from March 2019 to February 2020 at labour room emergency of Nalanda Medical College and hospital Patna Bihar. 100 patients with 37-41 weeks pregnancy with no complications were taken in the study group. 100 patients were taken as control Patients with term and post term pregnancy and having no contra-indication for vaginal delivery, having adequate pelvis, cephalic presentation with normal maternal and foetal parameters were included in the study. Patients with previous caesarean section, APH, PIH, and other medical disorders were not included in the study.

Group 1 (study group) 100 patients with 37-41 weeks of gestation were given mifepristone (200mg) and repeated at 24 hours interval if Bishop score did not improve and maternal foetal parameters were stable and uterine contraction were co-ordinate. If Bishop score did not improve after 48 hrs it was considered as failed induction. If labour sets in then oxytocin was used for augmentation of labour.

Group 2 (control group) 100 patients with 37-41 weeks gestation cervical sweeping and expectant management was done. Till 48 hours followed by augmentation of labour with oxytocin if Bishop score improved and labour sets in. Injectable antibiotics (ceftriaxone) was given in both the groups. Fetal monitoring (FHR & NST) and maternal monitoring by pulse, BP and uterine contraction was done to detect foetal distress, meconium stained liquor, uterine hyper stimulation at the earliest. Results are depicted in tabular form below.

## RESULTS:

**Table 1: Age & Parity Distribution**

| Distribution according to age | Study | Control |
|-------------------------------|-------|---------|
| 19 -25 years                  | 60    | 55      |
| 26 – 35 years                 | 40    | 45      |

| Parity Distribution | Study | Control |
|---------------------|-------|---------|
| Prima               | 65    | 60      |
| P1                  | 25    | 30      |
| P2                  | 10    | 10      |

**Table 2: Bishop Score**

| Bishop Score | Study | Control |
|--------------|-------|---------|
| ≥ 4          | 25    | 32      |
| < 4          | 75    | 68      |

**Table 3: preinduction cervical ripening**

| Bishop Score | Study | Control |
|--------------|-------|---------|
| ≥ 8-10       | 76    | 50      |
| < 8          | 24    | 50      |

**Table 4: Induction delivery interval**

| Induction Delivery Interval | Study    |          | Control  |          |
|-----------------------------|----------|----------|----------|----------|
|                             | Primi    | Multi    | Primi    | Multi    |
|                             | 47.1 hrs | 38.2 hrs | 52.2 hrs | 44.5 hrs |

**Table 5: Feto maternal outcome**

| Labour Outcome | Study | Control |
|----------------|-------|---------|
| Vaginal birth  | 74    | 52      |
| L.S.C.S        | 26    | 48      |
| PPH            | 2     | None    |
| NICU Admission | 3     | 3       |

## DISCUSSION:

60% of women in both study and control group were primigravida. Age distribution was also similar in both the groups. Gestational age was also same in both the groups. Bishop score was less than 4 in about 70% of patient in both the groups. Preinduction cervical ripening that is improvement in Bishop score of 8-10 after 48 hours was seen in 76% of patients in study group which is significant. In control group the preinduction cervical ripening after 48 hours was 50%. The results were similar to study conducted by Atwale et al [4], Fathima et al [1] and Cochrane systematic review (2009) [8].

The mean induction delivery interval in primigravida in the mifepristone group was 47.1 hours where as in control group was 52.2 hours. The results were similar to Priyanka et al [7].

The mean induction delivery interval in multigravida was 38.2 hours whereas it was 44.5 hours in control group. The need for oxytocin augmentation to achieve delivery was less in mifepristone group as compared to control group. 92% of women in control group required oxytocin. whereas 70% of women in mifepristone group required oxytocin. Results were similar to Wing et al [5].

74% of patients had vaginal delivery in mifepristone group. Only 52% delivered vaginally in control group.

LSCS was performed in 26% of patients in mifepristone group whereas 48% of patients underwent LSCS in control group. There was significant difference in mode of delivery in both the groups. NICU admission was comparable in both the groups. PPH occurred in 2 patients in mifepristone group.

### CONCLUSION:

The results of present study show that mifepristone use is a simple and effective method for inducing labour in term and post term pregnancy with poor Bishop score. The induction delivery interval is shortened and Fetomaternal outcome is good.

### REFERENCES:

1. Fathima S, Nayak SR, Rao B. Mifepristone in the induction of labour at term. *Int J Pharm Biomed Res.* 2013;4(3):164-6.
2. Yelikar K, Deshpande S, Deshpande R, Lone D. Safety and efficacy of oral mifepristone in preinduction cervical ripening and induction of labour in prolonged pregnancy. *J Obstet Gynaecol India.* 2015;65(4):221-5.
3. Dharani H, James PN. Mifepristone for induction of labour(review). *Chochrane Database Syst Rev.* 2009; 3, Art. No. CD002865.
4. Athawale R, Acharya N, Samal S, et al. Effect of mifepristone in cervical ripening for induction of labour. *Int J Reprod Contracept Obstet Gynecol.* 2013;2(1):35-38. doi: 10.5455/2320-1770.ijrcog20130206.
5. Wing DA, Fassett Michael J, Mishell Daniel R. Mifepristone for preinduction cervical ripening beyond 41 weeks' gestation: a randomized controlled trial. *Obstet Gynecol.* 2000;96:543-548. doi: 10.1016/S0029-7844(00)00947-9.
6. Frydman R, Lelaidier C, Baton-Saint-Mleux C, et al. Labour induction in women at term with mifepristone (RU 486): a double-blind, randomized, placebo-controlled study. *Obstet Gynecol.* 1992;80:972-975.
7. Priyanka, Shukla S Shetty. The effect of mifepristone in induction of labour at term. *MedPulse International Journal of Gynaecology.* February2021; 17(2): 32-35. <http://medpulse.in/Gynaecology/index.php>
8. Hapangama D, Neilson JP. Mifepristone for induction of labour. *Cochrane Database of Systematic Reviews* 2009, Issue 3. Art. No.: CD002865.