



CODEN [USA]: IAJPBB

ISSN : 2349-7750

**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**

SJIF Impact Factor: 7.187

<http://doi.org/10.5281/zenodo.4062194>Available online at: <http://www.iajps.com>

Research Article

**INDUCTION OF LABOUR WITH FOLEY'S CATHETER AND
PROSTAGLANDIN E 2 TABLET VERSUS PROSTAGLANDIN
E 2 TABLET ALONE**Dr Mahnoor Fatima¹, Dr Saif ullah², Dr Aneela Ishaq³¹Shaheed Zulfiqar Ali Bhutto Medical University²Hebei North University, China³Rawalpindi Medical University**Article Received:** August 2020 **Accepted:** September 2020 **Published:** October 2020**Abstract:**

Introduction: Induction of labour (IOL) is one of the commonest obstetric interventions, occurring in approximately 25% of term pregnancies in developed countries. **Aims and objectives:** The basic aim of the study is to find the induction of labour with Foley's catheter and prostaglandin E 2 versus Prostaglandin tablet E 2 tablet alone. **Material and methods:** This descriptive study was conducted in Shaheed Zulfiqar Ali Bhutto Medical University during June 2019 to January 2020. The data was collected from 100 pregnant women. The data was divided into two groups, one group received only Foley's catheter and prostaglandin E 2 and second group contain only Prostaglandin tablet E 2 tablet alone. **Results:** The data was collected from 100 pregnant women. The commonest indication for IOL was post-date pregnancy (58.3% in Group A and 61.4% in group B). There were no significant differences in the mode of delivery between the two study groups (63% in Group A and 61% in Group B had normal vaginal delivery). **Conclusion:** It is concluded that Foley catheter balloon is an effective non pharmacological method for cervical ripening. There is a greater chance of vaginal delivery with the simultaneous use of Foleys catheter with PGE2 for induction of labour.

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Please cite this article in press Mahnoor Fatima et al, **Induction Of Labour With Foley's Catheter And Prostaglandin E 2 Tablet Versus Prostaglandin E 2 Tablet Alone.**, Indo Am. J. P. Sci, 2020; 07(10).

INTRODUCTION:

Induction of labour (IOL) is one of the commonest obstetric interventions, occurring in approximately 25% of term pregnancies in developed countries. For women with an unfavourable cervix requiring IOL, cervical preparation is usually recommended, as oxytocin use alone leads to a longer induction to delivery interval and possibly increased intervention [1].

Both chemical and mechanical methods for cervical preparation are available, with prostaglandin preparations (PGE1 and PGE2) used as the chemical method, and variations of intracervical catheter (either single or double balloon) the most widely studied mechanical method. Mechanical methods are used to dilate the cervix, but may also increase prostaglandin and/or oxytocin release by causing localised inflammation, while prostaglandin preparations act to promote both cervical remodelling and uterine activity [2].

Induction of labour is a method of initiation of labour to deliver the baby vaginally. It has been practised since the 18th century. A lot of research has been carried out on the different available methods i.e mechanical and pharmacological. However, research on the combination of these methods is scarce [3]. From a clinical perspective, the decision about which method to use for induction of labour can be influenced by the woman's readiness for labour, for example whether or not membranes have ruptured spontaneously or whether or not the cervix remains undilated at the start of the induction process. Different methods used for inducing labour have different mechanisms of action, and vary in terms of how quickly birth is achieved and the likelihood of causing complications in women with different clinical characteristics [4]. Thus, the choice of method will take into account the reason for induction and its urgency. The woman's obstetric and medical history is also considered. For example, there is evidence that women may be more sensitive to drugs that stimulate the uterus if they have had a previous birth, and women who have a scar from a

previous caesarean birth are at increased risk of uterine rupture, which can result in hysterectomy and fetal death [5].

Aims and objectives

The basic aim of the study is to find the induction of labour with Foley's catheter and prostaglandin E 2 versus Prostaglandin tablet E 2 tablet alone.

MATERIAL AND METHODS:

This descriptive study was conducted in Shaheed Zulfiqar Ali Bhutto Medical University during June 2019 to January 2020. The data was collected from 100 pregnant women. The data was divided into two groups, one group received only Foley's catheter and prostaglandin E 2 and second group contain only Prostaglandin tablet E 2 tablet alone. Then we compare the values of both groups and analyse that which group provide better results. Data was stratified for age, gestational age, induction delivery interval, duration of labour, mode of delivery and maternal and fetal complications. Post stratification both groups were compared for efficacy by using chi-square test p-value < 0.05 was considered significant.

RESULTS:

The data was collected from 100 pregnant women. The commonest indication for IOL was postdate pregnancy (58.3% in Group A and 61.4% in group B). There were no significant differences in the mode of delivery between the two study groups (63% in Group A and 61% in Group B had normal vaginal delivery). The cesarean section rate was 34% in both groups. However, more cesarean sections were performed for fetal distress in group 1 (60% vs.44%), but this did not reach statistical significance ($P = 0.25$).

Instrumental delivery was required in 2.5% and 4.8% respectively. There were no significant differences between the two groups with respect to the mean time interval between induction and delivery.

Table 01: Demographic values of selected patients

	Group A	Group B	P-value
Age	28(6.3)	29.1(5.5)	0.91
Parity	1.4(1.5)	1.9(1.7)	0.53
Nulliparae (n(%))	50(50.5)	72(43.8)	0.43
Gestational age (weeks, mean(SD)) (weeks, median(range))	40.3(1.7) 41(37-42)	40.5(1.6) 40(37-42)	0.23
Bishop score prior to induction (mean(SD)) (median(range))	2.9(1.3) 3(1-5)	2.3(1.4) 2(0-5)	0.43

Table 02: Indication for induction of labor between groups

	Group A	Group B	P-value
Post date	89(58.3%)	129(61.4%)	0.72
Pre-eclampsia	9(4.4%)	10(4.7%)	0.29
Fetal growth restriction (IUGR)	5(2.4%)	7(3.3%)	0.0997
Reduced liquor	2(12.7%)	11(10.5%)	0.8302
Reduced fetal movement	23(11.3%)	11(11.4%)	0.6533
Maternal minor complaints*	6(2.7%)	5(2.4%)	0.0678
Others +	16(7.6%)	9(6.2%)	0.5750

DISCUSSION:

A broad range of pharmacological, mechanical, complementary and alternative methods have been used to induce labour. In the remaining sections of this chapter, we describe all of the pharmacological and mechanical methods for third-trimester induction of labour or cervical ripening which have been used in clinical practice and that have been examined in randomised trials [6]. Complementary or alternative methods have been less commonly used in NHS settings but have been used in comparable settings in other countries. Complementary and alternative methods are included here, as information on the effects and safety of such methods may be important for women who prefer a less medicalised birth [7].

Prostaglandins are hormones produced naturally by the body that are important in the onset of labour. Synthetically manufactured prostaglandins have been used in clinical practice since the 1960s to ripen the cervix and induce uterine contractions [8]. They are more frequently used in women when the cervix is unripe. Prostaglandins promote cervical ripening and encourage the onset of labour by acting on cervical collagen so as to encourage the cervix to soften and stretch in preparation for childbirth. Prostaglandins may also stimulate uterine contractions [9].

Despite the widespread use of prostaglandins as part of labour induction, they can cause a number of side effects, including nausea, vomiting, diarrhoea and fever. In addition, because of their effect on the uterus, prostaglandins can cause contractions that last too long, or are too frequent or are too strong. Excessive uterine activity, or hyperstimulation, may be associated with fetal distress, and in a small number of cases can lead to uterine rupture, especially in those women who have uterine scarring from surgery or a previous caesarean birth [10].

CONCLUSION:

It is concluded that Foley catheter balloon is an effective non pharmacological method for cervical ripening. There is a greater chance of vaginal delivery with the simultaneous use of Foleys catheter with PGE2 for induction of labour.

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