

# Intravaginal Dinoprostone versus Intra Cervical Foley Catheter for Induction of Labor

Nasrin Jalilian<sup>1</sup>, Taravat Fakheri<sup>1</sup>, and Mohammad Rasoul Ghadami<sup>2</sup>

<sup>1</sup> Department of Obstetrics and Gynecology, Maternity Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran

<sup>2</sup> Department of General Practitioner, School of Medicine, Kermanshah University of Medical Sciences, Kermanshah, Iran

## Dear Editors

We report the findings of a small prospective randomly allocated trial in which we compared the efficacy of intravaginal dinoprostone to transcervical Foley catheter for induction of labor. Women who were admitted to the delivery suite for labor induction and met criteria for enrolment in the trial were invited to participate. Among those, 20 received vaginal dinoprostone and Foley catheter was used for cervical ripening in 20 women. Inclusion criteria were singleton gestation, cephalic presentation, reactive fetal heart rate (FHR) pattern, intact membranes and gestational age between 37-41 weeks. Exclusion criteria were Bishop Score at least 7 or cervical dilatation greater than 3 cm, ultrasonographically estimated fetal weight greater than 4500 g or less than 2000 g, evidence of cephalopelvic disproportion, placenta previa or unexplained vaginal bleeding, previous section cesarean or uterine surgery and contraindications to prostaglandins. Women who had spontaneous labor during or after pre-induction ripening did not receive oxytocin unless a labor abnormality was diagnosed. According to our hospital's policy oxytocin beginning at 1 mIU and increasing 1 mIU every 15 minutes. After meeting the inclusion criteria, a 16F Foley catheter with a 30 ml balloon was inserted into the endocervical canal under direct visualization during a sterile speculum examination for women assigned to transcervical Foley catheters. After proper placement was ensured, 30 ml of sterile water was injected into the balloon. The catheter was then taped with traction to the inner thigh of the patient until spontaneous expulsion. If this did not occur, the catheter was deflated and removed after 12 hours. For the dinoprostone group, 3 mg of dinoprostone was administrated intravaginally every 6 hours, for a maximum of 4 doses.

The women's baseline characteristics of age, parity and gestational age at delivery and initial Bishop Scores were similar in both groups. The mean values of the

induction-delivery interval showed a significantly shorter interval in the Foley catheter group (14.4±5.5 h) compared with the dinoprostone group (23.1±3.1 h). Fewer women in the Foley catheter group required intrapartum oxytocin augmentation compared with those in the dinoprostone group. The difference was statistically significant. There were no significant differences in the first minute Apgar scores and the rates of neonatal resuscitation and admission into the neonatal intensive care unit between the two groups.

Although the comparison of the use of the Foley catheter and dinoprostone have been investigated in a few studies and the protocols of their administration were different (1-3), based on our finding, similar to the study of Niromanesh *et al.*, it seems that transcervical Foley catheter is more effective than intravaginal dinoprostone for labor induction (3). With the use of the Foley catheter, we achieved a reduction of the induction-delivery interval of about 37% rather than intravaginal dinoprostone. Studies with more power need to be conducted to evaluate any superiority of Foley catheter to intravaginal dinoprostone for induction of labor; perhaps, these data can serve as a Preliminary to assist in the design of a multicenter randomized trial.

## References

1. Moini A, Riazi K, Honar H, Hasanzadeh Z. Preinduction cervical ripening with the Foley catheter and saline infusion vs. cervical dinoprostone. *Int J Gynaecol Obstet* 2003;83(2):211-3.
2. Barrilleaux PS, Bofill JA, Terrone DA, Magann EF, May WL, Morrison JC. Cervical ripening and induction of labor with misoprostol, dinoprostone gel, and a Foley catheter: a randomized trial of 3 techniques. *Am J Obstet Gynecol* 2002;186(6):1124-9.
3. Niromanesh S, Mosavi-Jarrahi A, Samkhaniani F. Intracervical Foley catheter balloon vs. prostaglandin in preinduction cervical ripening. *Int J Gynaecol Obstet* 2003;81(1):23-7.

**Corresponding Authors:** Taravat Fakheri

Department of Obstetrics and Gynecology, Maternity Research Center, Kermanshah University of Medical Sciences, Kermanshah Iran  
Tel/Fax: +98 831 8259280, 918 1311664, E-mail: tfakheri@kums.ac.ir