



Is expectant management superior to elective induction of labor in nulliparous women who have an unfavorable cervix?

No. The strategies have comparable outcomes, according to this retrospective cohort study. The primary outcome of cesarean delivery was not statistically different between women who underwent induction and those who were expectantly managed (43.1% and 34.3%, respectively) ($P=.16$). There were no other differences in maternal or neonatal outcomes, except for a greater frequency of meconium among women managed expectantly (36.3%), compared with those undergoing induction of labor (7.0%) ($P<.001$). However, those who underwent induction had a longer duration of labor and delivery (median of 16.5 hours, compared with 12.7 hours among women managed expectantly) ($P<.001$).

FAST TRACK

Nulliparous women who have an unfavorable cervix have comparable neonatal and maternal outcomes, including similar rates of cesarean delivery, whether they are managed expectantly or undergo induction of labor

Osmundson S, Ou-Yang R, Grobman WA. Elective induction compared with expectant management in nulliparous women with an unfavorable cervix. Obstet Gynecol. 2011;117:583-587.

► **EXPERT COMMENTARY**

Suneet P. Chauhan, MD, Director, Division of Maternal-Fetal Medicine, Department of Obstetrics and Gynecology, Eastern Virginia Medical School, Norfolk, Va, with **Shilpa Babbar, MD**, third-year resident in Obstetrics and Gynecology, Eastern Virginia Medical School, Norfolk, Va.

Over the past 12 years, several studies have demonstrated a higher rate of cesarean delivery among nulliparous women with an unfavorable cervix who undergo induction of labor. However, these studies typically have compared induction of labor with spontaneous labor rather than with its appropriate counterpart—expectant management. In addition, in some cases, the increased rate of cesarean delivery among women who undergo induction of labor may be related to a comorbidity rather than elective induction.

In this retrospective cohort study, Osmundson and colleagues compared elective induction of labor at 39-0/7 to 40-5/7 weeks' gestation with expectant management beyond 39 weeks. All women in the

study were nulliparous, free of comorbidity, and carrying a singleton gestation; they also had an unfavorable cervix, as demonstrated by a modified Bishop score of less than 5.

(According to ACOG, the goal of induction of labor is to achieve vaginal delivery by stimulating uterine contractions before the onset of spontaneous labor.¹ Induction is elective when it is not associated with obstetric or medical complications.)

Although the rate of early term (37-0/7 to 38-6/7 weeks) induction increased significantly between 1991 and 2006, especially among non-Hispanic white women,² there is now strong evidence that early term delivery is associated with significantly higher neonatal, postneonatal, and infant mortality,³ compared with late term delivery (39 to 41 weeks). Therefore, elective induction should not be performed before 39 weeks' gestation—and it wasn't in the study by Osmundson and colleagues.

Strengths and weaknesses of the study

This study has a number of strengths:

- the a priori power calculation
- a review of each chart to ensure that no comorbidity was present

- availability of the Bishop score for each case
 - documentation of the duration of labor and the time of delivery (i.e., whether it occurred during daytime hours or at night).
- However, some weaknesses are also present:
- the retrospective design, with its inherent limitations
 - lack of explanation as to why only 102 women met inclusion criteria when the study period was 2 years at a tertiary center (a flow diagram of total deliveries and the reasons for exclusion would have been useful)
 - the fact that all inductions were performed using a Foley catheter balloon and oxytocin, thereby limiting appropriate assessment of resource utilization for other techniques, such as prostaglandin administration
 - the small sample size, which prevents determination of whether expectant management is linked to uncommon complications such as macrosomia, shoulder dystocia, or meconium-aspiration syndrome. ❌

WHAT THIS EVIDENCE MEANS FOR PRACTICE

Until a randomized, controlled trial provides definitive data on the relative outcomes of induction of labor and expectant management among nulliparous women with an unfavorable cervix, these patients may be informed that induction of labor is not associated with an increased rate of cesarean delivery. However, they also should be apprised that they are likely to spend more time in labor and delivery with induction than if they await spontaneous onset of labor.

>> SUNEET P. CHAUHAN, MD, AND SHILPA BABBAR, MD

References

1. ACOG Practice Bulletin #107: Induction of labor. *Obstet Gynecol.* 2009;114:386-397.
2. Murthy K, Grobman WA, Lee TA, Holl JL. Trends in induction of labor at early-term gestation. *Am J Obstet Gynecol.* 2011 Feb 21.
3. Reddy UM, Bettgowda VR, Dias T, Yamada-Kushnir T, Ko CW, Willinger M. Term pregnancy: a period of heterogeneous risk for infant mortality. *Obstet Gynecol.* 2011;117:1279-1287.

INDEX OF ADVERTISERS

AIMIS

2011 MIS Gynecology CME ProgramP 57

Amerifit Inc.

Brainstrong PrenatalP 17

Applied Medical, Inc.

Alexis-O RetractorP 37

Bayer Healthcare

BeyazP 64, C3, C4

CitracalP 3

One-A-Day PrenatalP 27

Conceptus Inc.

EssureP 7

Cooper Surgical

Lone StarP 5

Eli Lilly & Co

EvistaPP 10-14

Ferring Pharmaceuticals

LystedaPP 47, 48

Graceway Pharmaceuticals

ZyclaraC2, P 1

Hologic Inc.

MyosureP 51

NovoNordisk

VagifemPP 20-23

Pfizer Inc

PremarinPP 41-43

TEVA

ParagardCover Tip

Watson Pharmaceuticals

GeneressPP 31-33