Community Care of North Carolina

Pregnancy Medical Home Program Care Pathway:

Induction of Labor in Nulliparous Women

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Background

Induction of labor occurs in approximately 22% of all deliveries in the United States. Induction of labor is valuable when the benefits of delivery outweigh the risks of continuing the pregnancy. The benefits of induction should be weighed against the potential maternal and/or fetal risks. Increasing rates of labor induction are associated with increased risks for cesarean deliveries, preterm birth, and NICU admissions. Patients with labor induction utilize Labor & Delivery beds longer than spontaneously laboring patients. Therefore, prior to initiating an induction, the provider should review the indications, risks and benefits, and the necessity of the induction. If induction of labor is necessary and the Bishop score is ≤ 7, cervical ripening is recommended.

I. Prior to induction:

A. Confirm gestational age:
   1. Ultrasound at ≤ 20 weeks that establishes/confirms gestational age
   2. 30 weeks since fetal heart tones were documented by Doppler
   3. 36 weeks since documented positive hCG (urine or serum)

B. Determine that there are no absolute contraindications for vaginal delivery such as:
   1. Vasa previa or complete placenta previa
   2. Transverse fetal lie
   3. Umbilical cord prolapse
   4. Previous classical cesarean delivery or myomectomy entering the endometrial cavity
   5. Active genital herpes infection

C. Examine cervix and determine Bishop score (if ≤ 7, cervical ripening is recommended prior to induction).
   1. Labor should not be electively induced (i.e., without a medical indication) prior to $39^{0/7}$ weeks

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2. Elective labor induction is discouraged prior to $40^{6/7}$ weeks in patients with an unfavorable cervix (Bishop score ≤ 7) because of the increased risk for a Cesarean delivery.

D. Counsel patient regarding indication for induction, risks/benefits, and possible need for cesarean delivery.

II. Indications for Induction of Labor (not all inclusive):

A. Prior to 39 weeks:
Medically-indicated induction of labor may be necessary in the presence of certain maternal or fetal indications, which include, but are not limited to:

1. Abruptio placentae
2. Chorioamnionitis
3. Fetal demise
4. Gestational hypertension, preeclampsia, eclampsia (≥ 37 weeks)
5. Maternal medical conditions (e.g., diabetes mellitus, renal disease, chronic pulmonary disease, chronic hypertension, antiphospholipid syndrome)
6. Fetal compromise (e.g., severe fetal growth restriction, alloimmunization)
7. Twins:
    - monochorionic/diamniotic (37 weeks)
    - dichorionic/diamniotic (38 weeks)
8. Oligohydramnios, deepest vertical pocket < 2cm (≥ 37 weeks)
9. Premature rupture of membranes (≥ 34 weeks)

B. After 39 weeks:
1. Abruptio placentae
2. Chorioamnionitis
3. Fetal demise
4. Gestational hypertension, preeclampsia, eclampsia
5. Maternal medical conditions (e.g., diabetes mellitus, renal disease, chronic pulmonary disease, chronic hypertension, antiphospholipid syndrome)
6. Fetal compromise (e.g., severe fetal growth restriction, alloimmunization)
7. Oligohydramnios, deepest vertical pocket < 2cm
8. Induction of labor after 39 weeks with good dating criteria (See I.1 above) and a Bishop Score ≥ 8 may be appropriate for logistical reasons to ensure delivery at an appropriate facility, such as patients who live a long distance from hospital or those who must travel a great distance to deliver at a tertiary center for fetal indications
9. Post-term pregnancy (≥ 41 weeks)

III. Scheduling Induction of Labor

Complete ACOG Patient Safety Checklist Number 5, December 2011, or incorporate its components into hospital policy for scheduling induction of labor.

IV. Options for Cervical Ripening

For patients with a Bishop score less than or equal to 7, cervical ripening should be performed. Options for cervical ripening include mechanical (Foley catheter) or prostaglandin analogs (misoprostol, dinoprostone). If a prostaglandin analog is used, consideration should be given to misoprostol given its efficacy, safety and lower cost.

V. Induction Management

A. Documentation:
Document all of the following in patient's chart prior to initiating induction of labor:
   1. Counseling of risks/benefits of induction
   2. Indication for induction
   3. Gestational age
   4. Fetal lie
   5. Cervical exam to include Bishop score
   6. Clinical assessment of pelvic adequacy
   7. FHR status
   8. Estimated fetal weight (SGA, AGA, or LGA)
   9. Method for cervical ripening and/or induction

B. Induction Methods:
For patients with a Bishop score ≥8, cervical ripening is not indicated and labor induction should initiated with oxytocin. There is insufficient data to recommend membrane stripping or amniotomy alone for labor induction.

C. Failed Induction:
In the absence of fetal indications for cesarean delivery, an induction of labor should not be considered to have failed until the patient enters active labor. Based on recent data, active labor in nulliparous patients may not start until 6 cm dilation.

References:

1. Induction of Labor. ACOG Practice Bulletin No. 107, August 2009
2. Fetal Lung Maturity. ACOG Practice Bulletin No. 97, September 2008.
3. Spong CY, Mercer BM, D'Alton M, et al. Timing of indicated late-preterm and early-term birth. Obstet Gynecol 2011;118:323-33.
4. ACOG/ACP Guidelines for Perinatal Care, Sixth edition. Washington DC, November 2007.
5. Scheduling induction of labor. Patient Safety Checklist No. 5. American College of Obstetricians and Gynecologists. Obstet Gynecol 2011;118:1473–4.
6. Grobman WA. Predictors of Induction Success, Semin Perinatol 2012; 36:344-347
7. Swamy GK. Current Methods of Labor Induction. Semin Perinatol 2012; 36:348-352.
8. El-Sayed YY. Diagnosis and Management of Arrest Disorders: Duration to Wait. Semin Perinatol 2012; 36:374-378.

Note: Pregnancy Medical Home Care Pathways are intended to assist providers of obstetrical care in the clinical management of problems that can occur during pregnancy. They are intended to support the safest maternal and fetal outcomes for patients receiving care at North Carolina Pregnancy Medical Home practices. This pathway was developed after reviewing the Society for Maternal-Fetal Medicine and the American College of Obstetricians and Gynecologists resources such as practice bulletins, committee opinions, and Guidelines for Perinatal Care as well as current obstetrical literature. PMH Care Pathways offer a framework for the provision of obstetrical care, rather than an inflexible set of mandates. Clinicians should use their professional knowledge and judgment when applying pathway recommendations to their management of individual patients.