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Cervical Ripening Guidelines: Inpatient

Vaginal misoprostol

Patients with an unfavorable cervix may be given misoprostol 25-50 mcg vaginally q4h. Patients should remain recumbent on the monitor for 1 hour after placement of the tablet. Because of their absorption kinetics, it is not indicated to overlap vaginal and oral misoprostol. Oxytocin may be begun 4 hours after the last dose of misoprostol at the discretion of the provider. In the presence of fetal intolerance of labor (see **Appendix B** NICHD 3 electronic fetal monitoring guidelines), the misoprostol fragments may be removed if possible. In addition to a fluid bolus and maternal lateralization, terbutaline 0.25 mg IV or SC may be administered.

Oral misoprostol

Please see - Cervical Ripening: Oral Titrated Liquid Misoprostol

Dinoprostone in sustained-release

Dinoprostone in sustained-release tape can be used a second-line agent to the above. After initial placement, the patient should be continuously monitored for 2 hrs initially. After the initial phase then monitor on an as needed basis based on clinical response, e. g., re-institute monitoring if regular contractions or tachysystole on palpation.

Foley Bulb

1. Women with 1-2 prior cesarean delivery who are candidates for induction of labor for obstetric reasons are consented for cervical ripening by placement of a transcervical Foley catheter.
2. The patient should empty her urinary bladder in order to facilitate the procedure. Cervical digital examination is carried out and a Bishop score assigned.
3. Equipment recommended for placement of the device includes: Foley catheter with 30 mL bulb, Bozeman clamp or ring forceps.
4. After testing for integrity of the Foley bulb, the Bozeman or ring clamp is used to insert the catheter high into the endocervical canal. Ideal placement of the bulb of the catheter is at or above the level of the internal cervical os, where it is then inflated with 30 mL of sterile saline. After proper placement, the proximal end of the catheter tubing is taped to the inner aspect of the mother's thigh, allowing sufficient slack for her to extend her leg comfortably.
5. The mother is then monitored at bed rest for an hour after catheter placement. Bedrest is encouraged after placement so that the device is not inadvertently expelled, but the patient may be up to the bathroom as needed, exercising appropriate caution not to pull on the catheter.
6. Approximately 12 hours after placement of the device, it can be removed by deflating the bulb. A repeat cervical exam is then performed and the Bishop score reassigned. Oxytocin may be begun and rupture of membranes may be carried out at the discretion of the provider.

Double balloon device

1. Advance the Cervical Ripening Balloon through the cervix until both balloons have entered the cervical canal.
2. Inflate the uterine balloon with 40 mL of saline. Once the uterine balloon is inflated, the device is pulled back until the balloon abuts the internal cervical os.
3. The vaginal balloon is visible outside the external cervical os and is inflated with 20 mL of saline.
4. Once the balloons are situated on either side of the cervix, saline is added to a maximum of 80 mL per balloon.

Reference:

Induction of Labor. ACOG Practice Bulletin No. 107. American College of Obstetricians and Gynecologists. Obstet Gynecol 2009;114: 386–97. (Reaffirmed 2016)

Patient Safety Checklist on Scheduling Induction of Labor. No. 5 December 2011 American College of Obstetricians and Gynecologists (Accessed 7/13/18)

Macones GA et al. The 2008 National Institute of Child Health and Human Development Workshop Report on Electronic Fetal Monitoring Update on Definitions, Interpretation, and Research Guidelines. Obstet Gynecol 2008;112(3):661–6

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Appendix A
Modified Bishop Score (ACOG, after Bishop EH, 1964)

Score	Dilation (cm)	Effacement (%)	Station	Cx Consistency	Cx Position
0	closed	0-25	-3	firm	posterior
1	1-2	25-50	-2	medium	mid
2	3-4	50-75	0/-1	soft	anterior
3	>4	>75%	+1/+2	-	-

Total = _____

Unfavorable: <4
Borderline: 4-7
Favorable: >7

Appendix B
NICHD 3-Tier Fetal Heart Rate Interpretation System*

Category I (Normal)

-baseline rate: 110-160 bpm
-baseline FHR variability: moderate (6 to 25 bpm)
-late or variable decelerations: absent
-early decelerations: present or absent
-accelerations: present or absent

Category II (Indeterminate)

-baseline rate:
    -bradycardia (< 110 bpm) not accompanied by absent baseline variability
    -tachycardia (> 160 bpm)
-baseline FHR variability:
    -minimal baseline variability (0 to 5 bpm)
    -absent baseline variability not accompanied by recurrent decelerations
    -marked baseline variability (> 25 bpm)
-accelerations:
    -absence of induced accelerations after fetal stimulation
-periodic or episodic decelerations
    -recurrent variables accompanied by minimal or moderate baseline variability
    -prolonged decelerations >2 minutes but <10 minutes
    -recurrent late decelerations with moderate baseline variability (6 to 25 bpm)
    -variables with other characteristics (slow return to baseline, “overshoots”)

Category III (Abnormal)

-absent baseline FHR variability and any of the following:
    -recurrent late decelerations
    -recurrent variable decelerations
    -bradycardia (< 110 bpm)
    -sinusoidal pattern

*Macones GA et al. The 2008 National Institute of Child Health and Human Development Workshop Report on Electronic Fetal Monitoring Update on Definitions, Interpretation, and Research Guidelines. Obstet Gynecol 2008;112(3):661–6