Covenant Health
Rural Obstetrics

POLICY

Initiated by: Obstetrics

POLICY

Approved by: Site Administrator

PROCEDURE

Date First Issued: August 2015

Category: Women’s Health Obstetrics

Ref Policy #:

Topic: VAGINAL PROSTAGLANDIN ADMINISTRATION (PREPIDIL®, PROSTIN®E2)

1.0 OBJECTIVES

1.1 Cervical Ripening

1.1.1 The major clinical application of vaginal prostaglandin is to induce softening, effacement and dilatation of the cervix to enhance labour induction when indicated.

1.1.2 It is most commonly used in those patients who are at or near term in a vertex presentation who require induction of labour with an unripe cervix.

1.1.3 There is no indication for cervical ripening independent of labour induction. Therefore, cervical ripening should be considered part of the labour induction process.

1.2 Induction of Labour

1.2.1 May be used for labour induction in a patient with a ripe cervix who meets the indication(s) criteria for labour induction.

1.2.2 "Favourability" of the cervix is the most important predictor of success.

2.0 GENERAL INFORMATION

2.1 Physician Responsibilities

2.1.1 The physician must ensure that the patient is booked in the appropriate area of the hospital for cervical ripening/induction.

2.1.2 A booking sheet is completed in its entirety including indication(s) for induction, obtaining an informed patient consent, Bishop’s score and specific cervical ripening/induction orders.

2.1.3 The physician should indicate if the patient is an inpatient or an outpatient.

2.1.4 It is the physician’s responsibility to ensure that the patient is aware that the time and date given for cervical ripening or induction is tentative depending on priority, bed and staff availability.

2.1.5 If there is a caution for induction or the method of induction, a clear explanation and rationale should be recorded in the patient’s chart.

2.1.6 The physician must exercise caution in inducing/augmenting those patients with previous lower uterine segment scar.

2.2 Nursing Responsibilities

2.2.1 The registered nurse is responsible to ensure knowledge and skills in fetal health.
surveillance and induction of labour standards and procedures

2.2.2 Ensure booking sheet received, completed and reviewed
2.2.3 Review patient history, indication(s) and contraindication(s) for induction
2.2.4 Provide patient with information regarding routines and expected progress

3.0 SPECIFIC CONTRAINDICATIONS OR CAUTIONS WHEN USING VAGINAL PROSTAGLANDIN

There are many absolute contraindications and situations where cautious use is indicated for cervical ripening or induction or labour. The general lists for these contraindications are provided in Part 1 – General Information. The following are considerations that are specific to Prostaglandin E₂.

3.1 Known sensitivity to Prostaglandin E₂ or other constituents of the gel including colloidal silicon dioxide and triacetin

3.2 Prostaglandin E₂ must be used with caution in patients with:
   3.2.1 Previous cesarean sections or uterine scars
   3.2.2 Evidence of fetal compromise not requiring emergent delivery
   3.2.3 Ruptured membranes

If a prostaglandin product is required in these instances, Cervidil Insert should be considered as an alternative as it can be easily removed

3.3 Prostaglandins should be used with caution in patients with certain medical conditions. This includes patients with:
   3.3.1 Compromised cardiovascular, hepatic or renal function
   3.3.2 Asthma
   3.3.3 Glaucoma
   3.3.4 Epilepsy who are not under good control

4.0 EQUIPMENT

Prostin E₂ gel ®:
- Fetal Monitor
- Vaginal gel – 1mg or 2mg pre-filled syringe (room temperature*)
- Sterile gloves
- Muko

Prepidil ®:
- Fetal Monitor
- Endocervical gel – 0.5mg in pre-filled syringe (room temperature*)
- Sterile gloves
- Speculum
- Flashlight
- Muko

*Ideally, Prostaglandin gel should be removed from the refrigerator and allowed to warm to room temperature prior to insertion. Do not microwave. The gel will remain stable at room temperature for 48 hours, then it must be discarded.
5.0 PROCEDURES

5.1 Check chart for Doctor's order, dosage and route

5.2 Explain procedure to patient

5.3 Apply the fetal monitor and obtain a reactive monitor strip prior to prostaglandin E2 administration. If the fetal heart rate tracing is non-reassuring, it is necessary to contact the attending physician for specific orders.

5.4 The attending physician administers the prostaglandin product.

5.5 Documentation of cervical status is required. Ideally, the person administering the gel should do this documentation.

PREPARE AND ADMINISTER PROSTAGLANDIN E2

PROSTIN E₂ GEL ®

Assemble Syringe

• Remove syringe from sterile package
• Remove peel off seal from end of syringe
• Remove protective end cap to serve as plunger extension
• Insert protective end cap into plunger assembly in barrel of syringe
• Do not depress the plunger

Note: When administering PREPIDIL®, a sterile catheter tip is included in the packaging (to assist with insertion into the cervical os)

Administer Prostin E₂ gel ® into the Posterior Fornix:

• The contents of the Prostin E₂ gel ® syringe are infused into the posterior fornix of the vagina
• Documentation of cervical status is required. Ideally, this is done by the person administering the gel
• The patient will remain on bed rest (tilt/lateral) for 1 hour to minimize leakage
• One hour of continuous fetal monitoring is required
• Palpation of contractions and inspection of EFM tracing is required Q 15 minutes for 1 hour post insertion until discharges or active labour.
• Physician may order a patient pass.

PREPIDIL ®

Assemble Syringe:

• Assemble as indicated for prostaglandin syringe from sterile package
• Remove peel off seal from end of syringe
• Remove sterile catheter from package
• Firmly attach catheter hub to syringe tip. Please note that proper attachment is indicated by the sound of **two distinct clicks**
• Express sufficient gel to fill catheter to ensure it is primed and functional

Administer Prepidil ® Gel into the Endocervical Canal:
• The attending physician, consultant or designate administers the gel
• The contents of the Prostaglandin endocervical gel (Prepidil ®) syringe are injected into the cervical canal
• Visualization may be aided by the use of a speculum
• Placement of gel above the level of the internal os or into the amniotic space can cause uterine hyperstimulation
• The patient will remain on bed rest (tilt/lateral) for 30 minutes to minimize leakage
• Continuous fetal monitoring is required for at least 30 minutes
• Palpation of contractions and inspection of EFM tracing or intermittent auscultation is required Q 30 minutes until discharge or active labour.

6.0 RECOMMENDED FREQUENCY OF DOCUMENTATION OF FETAL HEART, CONTRACTIONS AND VITAL SIGNS

6.1 It is recommended that during cervical ripening for induction, the patient remains on continuous electronic fetal monitoring (EFM) for 1 hour post insertion
6.2 In pregnancies at risk, continuous fetal monitoring should be considered
6.3 In situations where intermittent auscultation is used the fetal heart rate must be auscultated after the contraction for one full minute. The maternal pulse should be palpated simultaneously to differentiate maternal pulse from fetal heart rate.
6.4 Interpretation of Auscultation:
   • Reassuring
     • Normal baseline rate range $\rightarrow$ 110 – 160 bpm
     • Audible accelerations
   • Non-reassuring
     • Abnormal baseline rate range
       - Tachycardia > 160 bpm
       - Bradycardia < 110 bpm
     • Presence of decelerations
     • No FH acceleration noted with the presence of fetal movement
6.5 If during auscultation there is evidence of non-reassuring features, the external fetal monitor should be applied to obtain more information on fetal status
6.6 Where continuous fetal monitoring is recommended, should there be occasional interruptions of the fetal heart rate tracing, document reason(s) on the patient care record and fetal monitor tracing.

<table>
<thead>
<tr>
<th>Stage of Labour</th>
<th>Frequency of FHR</th>
<th>Frequency of Vital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspection/Auscultation &amp; Contractions</td>
<td>Signs</td>
<td></td>
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<tr>
<td>---------------------------------------</td>
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<td></td>
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<tr>
<td>Early and latent labour → Cervix &lt; 3 cm dilated</td>
<td>Q 30 – 60 minutes while awake</td>
<td>BP, P q 4 h while awake</td>
</tr>
<tr>
<td>Active labour → 4 cm to 10 cm dilated</td>
<td>Q 15 – 30 minutes</td>
<td></td>
</tr>
<tr>
<td>Second stage → Prior to actively pushing</td>
<td>Q 15 minutes</td>
<td>BP, P, Temp q 1 h</td>
</tr>
<tr>
<td>Second stage → When actively pushing</td>
<td>At least every 5 minutes of after each contraction</td>
<td></td>
</tr>
</tbody>
</table>

The above are recommended minimal standards for documentation. Should the maternal or fetal condition warrant more frequent assessments may be provided at the discretion of the nurse or physician.

### 7.0 ADMINISTRATION CONSIDERATIONS OF VAGINAL PROSTAGLANDINS

#### 7.1 Effects and Adverse Reactions:

**7.1.1** Most women notice some backache or contractions shortly after Prostaglandin gel insertion and may have a mild burning sensation for up to one hour after insertion.

**7.1.2** Prostaglandin E₂ vaginal gel should not be applied endo-cervically as the higher dosages may cause hypertonus and fetal compromise.

**7.1.3** The half life of circulating Prostaglandin is 2.5 – 5.0 minutes.

**7.1.4** Potential adverse reactions include:
- Nausea, vomiting and/or diarrhea
- Fever/Shivering
- Uterine hypertonus (which may result in fetal compromise)

**7.1.5** If there is evidence of uterine hypertonus or a non-reassuring fetal heart rate pattern develops, the fetus is at risk for compromise. Depending on circumstances it may be prudent to consider:
- Removing as much of the gel as possible
- Initiate intrauterine resuscitation – IV bolus, position change, Oxygen @ 10 L/min
- Administer tocolytics as indicated (refer to Appendix T)
- Preparation for operative delivery as indicated

#### 7.2 Considerations for Timing of Administration:

**Timing of Prostaglandin Productions:**
- Three (3) doses of Prostin E₂ vaginal or Endocervical gel may be administered in a 24 hour period with a minimum of 6 hours between each dose
- On the rare occasion that prostaglandin products are required after oxytocin has been discontinued, it is required that one hour must elapse prior to administering gel. Uterine activity must be carefully assessed prior to administration.
Timing of Oxytocin:
- Prostaglandin E₂ products should not be administered simultaneously with Oxytocin
- Oxytocin should not be initiated for at least 6 hours after Prostin E₂ or Propidil administration

8.0 OUTPATIENTS

8.1 Outpatient cervical ripening/induction of labour may be considered at the discretion of the physician.
8.2 Outpatients may be discharged (as indicated by their attending physician) 2 hours minimum after Prostaglandin products have been administered
8.3 Initiate indicated outpatient documentation and follow-up as applicable
8.4 Clinical evaluation and patient teaching must be completed prior to the patient going on pass. This includes:
- Reassuring fetal monitor tracing
- Vaginal exam (as indicated) to rule out active labour
- Physicians order(s) for follow-up instructions
- Patient teaching:
  - When to return and/or call the hospital:
    - Onset of regular contractions \( \leq 5 \text{ minutes} \)
    - Bleeding (spotting/show discussion)
    - Spontaneous rupture of membranes
    - Decreased fetal movements
    - Fever
    - Chest pain or dyspnea (911)
  - The patient must be provided with hospital contact information and a clear follow up appointment

9.0 DOCUMENTATION

9.1 Delivery Record Part 2
9.2 Patient Care Notes
9.3 Progress Notes
9.4 Patient Care Orders
9.5 Fetal monitor tracings