Appendix 3 – Induction of labour with Prostaglandin E2 (pge2) Vaginal Gel (Prostin)

This guideline has been based on the Victorian Standard for Induction of Labour (IOL) with Prostaglandin E2 (PGE2) Vaginal Gel (Prostin) Clinical Practice Guideline prepared by the Maternity Newborn Clinical Network which has the objective of providing Maternity Service providers in Victoria with an agreed Standard of Care based on the best currently available evidence. PGE2 Vaginal Gel (Prostin) is synthetically produced prostaglandin used to promote cervical ripening (softening and effacement) and to stimulate myometrial contractions, where delivery is indicated but not urgent and increases the likelihood of a spontaneous vaginal birth.

Never proceed with PGE2 IOL with the following:

- Bishop score ≥ 6,
- Abnormal Cardiotocography (CTG) or known fetal compromise.
- Persistent maternal temperature.
- Vaginal bleeding.
- Known hypersensitivity to PGE2 or any constituents of the gel.
- Contraindication to vaginal birth (e.g. placenta/vasa praevia, active genital herpes).
- Spontaneous labour.
- Previous caesarean section.
- Mal presentation.
- Relative contraindications (may be used with caution under lead obstetrician supervision):
  - Multiparous women particularly grand multiparity (>5 previous births)
  - Previous uterine hyperstimulation
  - Ruptured membranes.
  - Mobile presenting part.
  - Asthma.
  - Cardiac disease.
  - Multiple pregnancy.
  - Epilepsy.
  - Glaucoma or raised intraocular pressure.
  - Unexplained vaginal discharge or abnormal uterine bleeding during the pregnancy.

Before the insertion of the Prostin ensure:

- Ensure the woman has had the opportunity to make an informed decision about her care and treatment after a full explanation of the benefits and risks associated with the procedure. Document consent
- Bishop score must be ≤5 at the time of insertion.
- PGE2 vaginal gel (Prostin) must not be inserted into the cervical canal it goes into the posterior fornix

Following the insertion of Prostin to reduce the risk of hyperstimulation (tachsystole):

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• Oxytocin (Syntocinon) should not be commenced within 6 hours of PGE2 gel being inserted
• Artificial rupture of membranes (ARM) should not be performed within 4 hours of insertion of PGE2 vaginal gel

**Physiological management of the third stage is contraindicated when labour is induced.**

**Potential complications of PGE2 administration include:**

• Uterine hyperstimulation (refer to CPP Uterine Hyperstimulation (Tachysytole) - Management of).
• Abnormal CTG.
• Hypersensitivity reactions.
• Vaginal irritation.
• Gastrointestinal disturbances (nausea, vomiting and diarrhoea) (rare in 1% or cases).
• Placental abruption.
• Amniotic fluid embolism.
• Postpartum haemorrhage.
• Genital oedema

**Prostin Insertion**

**Assessment**

• Explain the procedure to the woman and ensure consent for IOL is documented (*MR/360.02 Consent for Procedure Form recommended*).
• Document baseline maternal vital signs and record, Maternal blood pressure, Pulse rate, Uterine activity over a 10 minute period (palpated), Vaginal loss
• Perform abdominal palpation to confirm foetal lie and presentation - document findings
• A normal CTG must be demonstrated within 6 hours (with no change in clinical situation) prior to insertion of PGE2 gel.
• Assess and document vaginal examination and Bishops Score
• Assess uterine contractility
• The CTG report must be documented including the presence (frequency) or absence of uterine activity

**Administration**

The medical officer must write the order for the PGE2 on the medication chart MR 700.2 in the once only section.

PGE2 vaginal gel should be removed from the refrigerator no more than 30 mins prior to insertion

**Dosage**

1st dose: 1mg nulliparous and multiparous
2nd dose: 1 or 2 mg nulliparous, 1 mg multiparous
3rd dose: 1 or 2 mg nulliparous, 1 mg multiparous

**Note:** These dosages may be altered at the request of the prescribing medical practitioner depending on the Bishops Score.
Insertion of Prostin

- A vaginal examination is performed and the posterior fornix of the vagina identified.
- The PGE2 vaginal gel is inserted via the syringe into the posterior fornix of the vagina avoiding the cervical canal.
- The administering clinician must ensure the PGE2 order is recorded and signed on the drug chart.
- The woman should remain recumbent in lateral position for at least 30 minutes to retain gel and prevent supine hypotension

Observations following the Insertion of Prostin

- Continuous CTG monitoring for at least one hour
- A midwife/medical officer must stay with the woman and observe the CTG for the first 10 minutes
- If the first 10 minutes is reassuring the midwife must review the woman and CTG intermittently (at least every 10 minutes)
- 50 minutes after insertion the midwife must remain with the woman for a full set of observations including: Maternal blood pressure, Pulse rate, Uterine activity over a 10 minute period (palpated), Vaginal loss, CTG report

In the presence of abnormal fetal heart rate patterns and uterine hyperstimulation initiate emergency management principles and consider tocolysis refer to CPP0459 Uterine Hyperstimulation (Tachysystole)- Management of

Subsequent observations

- The woman may ambulate as desired after 1 hour if the CTG monitoring is normal
- After the initial hour if no contractions are detected and fetal wellbeing is established:
  - Half hourly foetal heart rate (FHR) by intermittent auscultation using a Doppler ultrasound
  - Half hourly vaginal loss (ruptured membranes, liquor, bleeding)
  - Hourly maternal uterine activity over a 10 minute period
  - After 3 hours, cease the frequent observations, if there are no contractions detected/or reported by the woman and no foetal concerns
  - 6 hours after initial PGE2 vaginal gel insertion, a vaginal examination should be performed to reassess the Bishop score

Continuous CTG monitoring should be recommenced if:

- FHR abnormalities are auscultated
- Labour is established
- Spontaneous rupture of membranes (SROM) occurs
- The woman reports uterine activity
- The woman continues to contract but not in active labour
Method of assembly of Prostin

1. Remove protective end cap (to serve as plunger rod)

2. Insert protective end cap into the syringe.