

PRACTICE STANDARD

B-00-12-10072 – Fetal Fibronectin Testing

Fetal Fibronectin Testing in Maternity Centre

Site Applicability: SPH Maternity Centre

Skill Level:

Specialized Skill: RN in the Maternity Centre

Need to Know:

Fetal Fibronectin (fFN) is a glycoprotein produced by the chorionic membranes and is localized to the deciduas basalis adjacent to the intervillous space. It appears to help bind the chorionic membranes to the underlying maternal decidua.

There is a strong association between the presence of fFN in the cervical-vaginal secretions and preterm labour (PTL). fFN is virtually never found in the cervical-vaginal secretions between 24 and 34 weeks gestation unless the cervix has undergone premature effacement and dilatation, usually in association with symptomatic uterine contractions. It can normally be found in the cervical-vaginal secretions until 22 weeks gestation.

A negative fFN test result confers more than 95% likelihood of remaining undelivered for the 14 days following a negative test result. This is especially important when a decision to arrange a maternal transfer must be made within a short period of time.

Indications:

- 24 to 34 weeks gestation
- Threatened PTL (regular uterine contraction over 6/hour and/or pelvic pressure)
- Intact membranes
- Cervix 3 cm or less dilated
- Established fetal well-being

Contraindications:

- EGA less than 24 weeks or more than 34 completed weeks
- Preterm PROM – this protein is found in high concentrations in amniotic fluid
- Cervical cerclage
- Active vaginal bleeding – fFN is in plasma
- Vaginal exam or endocervical U/S in past 24 hours – lubricants can alter predictability of the test
- Intercourse in the past 24 hours – fFN is found in seminal fluid
- fFN test within past 7 days

Accuracy of the results is decreased by several confounding factors:

False Positive results:

PRACTICE STANDARD

B-00-12-10072 – Fetal Fibronectin Testing

- Digital examination prior to sterile speculum exam
- More than minimal amount of blood in specimen
- Presence of amniotic fluid
- Patient had intercourse within the previous 24 hours

False Negative results:

- Lubricant used on speculum

Responsibilities:

Senior Obstetrical Resident or Attending/On-call Obstetrician - Takes the specimen according to recommended procedure.

RN – Assists with specimen collection and ensures transportation to SPH Lab. This is a **STAT** test performed 24/7 at SPH lab.

Lab – Call the results to the Maternity Centre 24/7

PRACTICE GUIDELINE

Equipment and Supplies:

1. Sterile vaginal speculum
2. Sterile gloves
3. Light source
4. Electronic Fetal Monitor with appropriate attachments
5. RapidfFN Kit (swab, collection tube with tube cap)

STEPS	RATIONALE
1. Assess for signs of PTL: <ul style="list-style-type: none"> • Gestational age 24 to 34 weeks • Uterine contraction, low abdominal pain, cramps, pelvic pressure, low back ache • Increased vaginal secretions • Bleeding, spotting, show Ensure that membranes are intact	
2. Ensure that the swab and transport tube is intact and has not leaked.	Do not use if swab package integrity is compromised or transport tube has leaked.
3. Ensure that the patient has not had a digital vaginal exam, culture specimen collection, vaginal ultrasound, or vaginal intercourse.	May interfere with specimen collection and produce false results.

PRACTICE STANDARD

B-00-12-10072 – Fetal Fibronectin Testing

<p>4. Senior Resident/Obstetrician takes swab using RapidfFN Kit. Swab is lightly rotated across the posterior fornix of the vagina for 10 seconds during sterile vaginal speculum exam. Take care not to break the swab during the specimen collection. (See Appendix B)</p>	<p>Preterm labour is a high-risk problem and must be assessed by the Senior Resident/Obstetrician.</p> <p>Swab needs to absorb cervicovaginal secretions.</p>
<p>5. Swab Preparation: See Appendix B</p> <ul style="list-style-type: none"> • Remove lid from test tube • Insert swab into buffer in test tube • Carefully break the shaft of the swab at the score mark so that it is even with the top of the tube. • Align the shaft with the hole inside the tub cap and push the cap down tightly, sealing the tube • Label the tube and send to Lab Accessioning with Clinical Request Form as soon as possible. 	<p>Correct use of the kit will maximize accuracy of results.</p> <ul style="list-style-type: none"> • Avoid leakage of buffering solution. • Specimens not tested within 8 hours of collection must be refrigerated at 2° to 8° C.
<p>6. If evidence of ruptured membranes, discard fFN swab.</p> <p>7. If membranes are intact, See appendix A</p>	

Patient Education and Resources:

1. Explain procedure to patient and support person(s).
2. Provide support for patient, as this is a very stressful time.
3. Once results are known, provide additional information, reassurance, and ongoing management as required:
 - Positive Result:
 - Treatment of PTL
 - Possibility of transfer to other care facility
 - Negative Result:
 - Reassurance
 - Signs of PTL
 - Advice re activities to avoid that may aggravate symptoms
 - Need for close follow-up
 - Review directions for medications if required for treatment of vaginal infection

PRACTICE STANDARD

B-00-12-10072 – Fetal Fibronectin Testing

Documentation:

1. BC Maternal Triage and Assessment Record – initial assessment and interventions
2. BC Labour Partogram – if in active labour
3. Lab requisition.
4. Fetal Monitoring Label
5. Fetal Monitoring Tracing

References:

1. Lockwood, C.J. Diagnosis of preterm labour in UpToDate, Berghella, V. (Ed). UpToDate, Waltham MA, 2017
2. Perinatal Services BC (2005) Obstetric Guideline 2A Preterm Labour, Accessed September 2017 at: <http://www.perinatalservicesbc.ca/Documents/Guidelines-Standards/Maternal/PretermLabourGuideline.pdf>

Persons/Groups Consulted:

MSQC

Author:

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Revised By:

Clinical Nurse Leader – Maternity
Nurse Educator (Interim) – Maternity

Approved/Reviewed/Revised:

January 2006

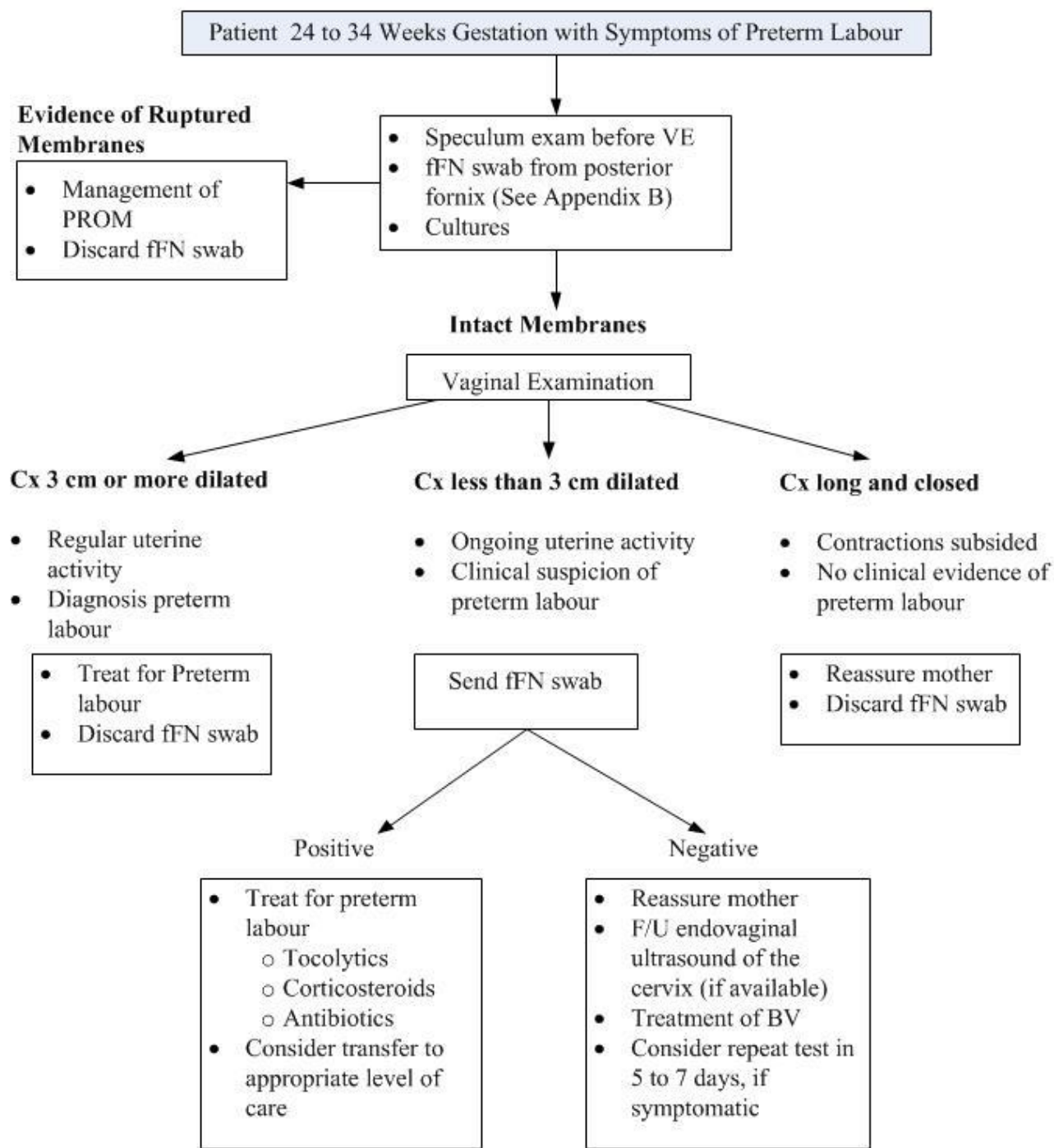
Revised: August 2013

Reviewed: October 2017

Appendix A

Algorithm

Fetal Fibronectin Testing for Suspected Preterm Labour



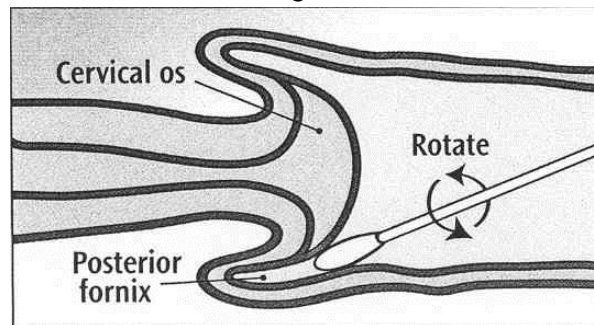
Appendix B

Specimen Collection

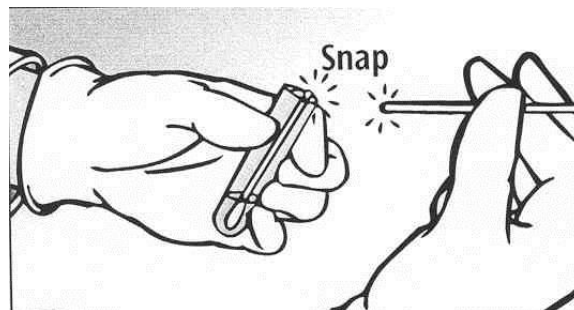
3 Easy Steps to Collect the fFN Swab

The fFN specimen should be only collected using the RapidfFN Kit.

1. During the speculum examination, swab is lightly rotated across the posterior fornix of the vagina for 10 seconds to absorb cervicovaginal secretions.



2. Remove the swab and immerse tip in buffer. Break the shaft at the score even with the top of the tube.



3. Align the shaft with the hole inside the tube cap and push down tightly over the shaft, sealing the tube. Ensure the shaft is aligned to avoid leakage.

