

PROM: Prelabor Rupture of Membranes
PPROM: Preterm Prelabor Rupture of
Membranes

Definition

- ✓ Premature(Prelabor) rupture of membranes (PROM)
 - Rupture of membranes before the onset of labor
 - Epidemiology : 8%

- ✓ Preterm Premature(Prelabor) Rupture of Membranes (PPROM)
 - Membrane rupture before labor that occurs before **37** weeks of gestation
 - Epidemiology : 1%

Risk factor

✓ PPRM

- Genital tract infection, a history of PPRM in a previous pregnancy, antepartum bleeding, and cigarette smoking have a particularly strong association with PPRM

Diagnosis

Physical examination

- ✓ Digital Cervical Examination
 - **should be avoided** unless active labor or imminent delivery
- ✓ Sterile Speculum Examination
 - **visualization of amniotic fluid:** passing from the cervical canal or pooling in the vagina
 - inspect for cervicitis and prolapse umbilical cord or fetal parts
 - assess cervical dilatation and effacement

Diagnosis

✓ Ultrasound

- oligohydramnios (MVP of amniotic fluid <2 cm in depth or AFI ≤ 5 cm)
- Adjunct, not diagnostic

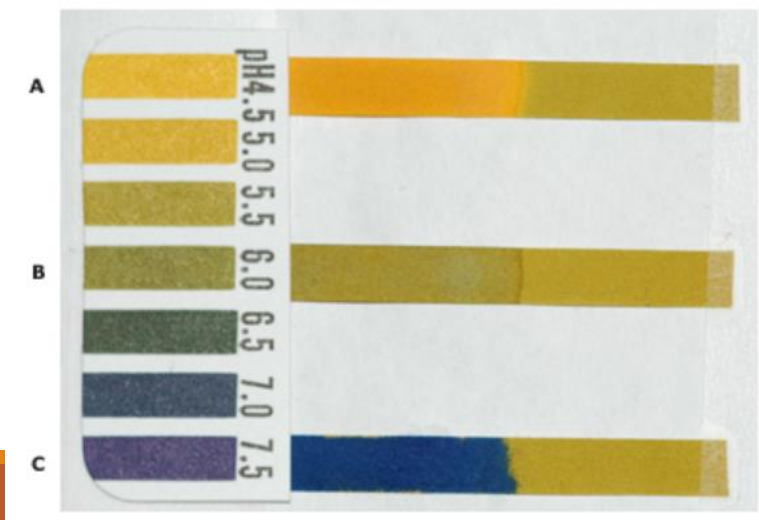
Diagnosis

Commercial tests

- ✓ PAMG-1 (AmniSure)
 - Detect PAMG-1 (placental alphamicroglobulin-1) protein
 - The test is not affected by semen or trace amounts of blood.
- ✓ IGFBP-1 (Actim PROM)
 - Detect IGFBP-1, also called placental protein 12
- ✓ Placental protein 12 and alpha-fetoprotein (ROM Plus)
- ✓ Tampon test

Diagnosis

- ✓ **Nitrazine** – Simple pH test of vaginal fluid
 - Vaginal secretions : 3.8–4.2
 - Amniotic fluid : 7.0–7.3
 - False-positive : blood or semen, certain lubricants, trichomonas, or bacterial vaginosis
 - False-negative : prolonged membrane rupture and minimal residual fluid



Nitrazine paper

(A) Normal.

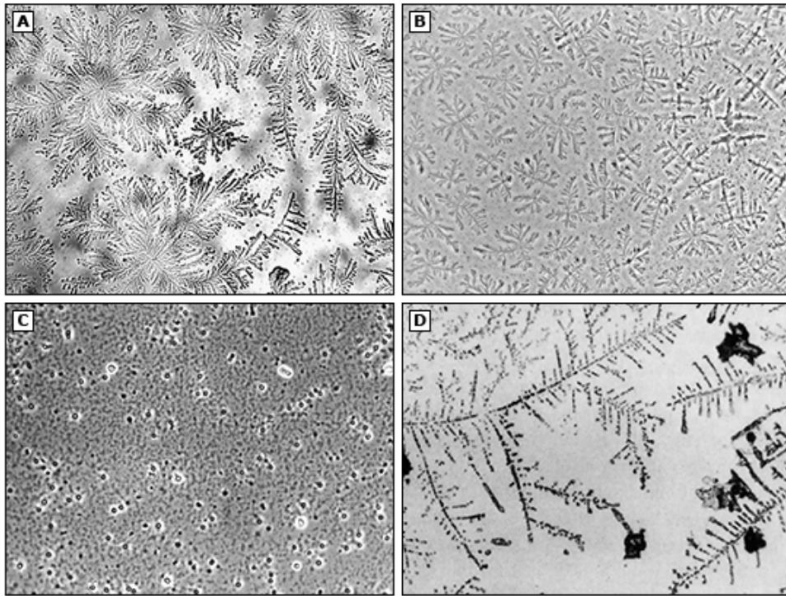
(B) Bacterial vaginosis.

(C) Pregnant patient with prelabor rupture of membranes.

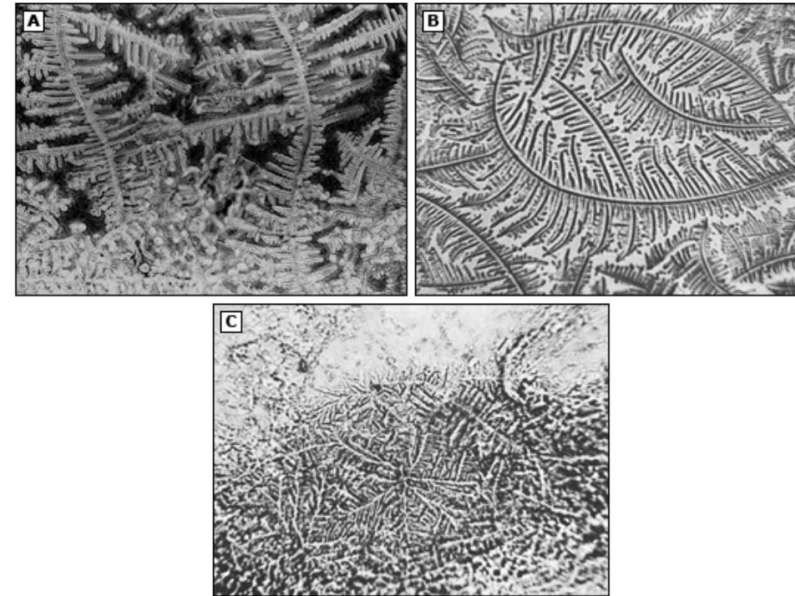
Diagnosis

✓ Fern –

- **Dried amniotic fluid** shows an arborization (ferning) pattern when viewed under a microscope.



Ferning of amniotic fluid



Ferning of cervical mucus

Treatment

Evaluation

- Gestational age
- Presence or absence of maternal/fetal infection
- Presence or absence of labor
- Fetal presentation
- Fetal well-being (eg: non stress test)
- Expectation of fetal lung maturity based on gestational age
- Cervical status (by visual inspection)

Treatment

Delivery indication

- Maternal-Fetal Distress
- Infection
- Abruption
- Cord Prolapse

Treatment

Expectant Management

- Typical for GA 32 weeks or less
- Antenatal corticosteroid
- Tocolysis if indicated for lung maturity
- Antibiotics to prolong latency: 48-hour IV ampicillin and erythromycin (or azithromycin), then 5 days of oral amoxicillin and erythromycin (or azithromycin)
- Fetal Surveillance
- Majority Inpatient Observation
- Assess for Chorioamnionitis
- **Goal: Mature lung profile, reduction of preterm birth risks**

Expectant Management

Risks

- Abruptio
- Chorioamnionitis
- Cord Prolapse
- Pulmonary Hypoplasia
- Skeletal Deformities
- Endometritis

Benefits

- Mature lung profile
- Advancing GA (reducing risks associated with preterm birth)

Gestational age	Treatment
>=37 weeks	<ul style="list-style-type: none"> • Delivery (Induction or cesarean) • GBS prophylaxis should be based on prior culture results
34 ~ 36+6 weeks	<ul style="list-style-type: none"> • Expectant management or immediate delivery • Corticosteroids for patients at risk of preterm birth within 7 days • GBS prophylaxis • Delivery if infection, fetal distress, oligohydramnios
24 ~ 33+6 weeks	<ul style="list-style-type: none"> • Expectant management • Antibiotics to prolong latency: 48-hour IV ampicillin and erythromycin (or azithromycin), then 5 days of oral amoxicillin and erythromycin (or azithromycin) • Corticosteroids • GBS screening and prophylaxis • MgSO4 for neuroprotection in patients < 32 0/7 weeks gestation
<24 weeks (perivable)	<ul style="list-style-type: none"> • Expectant management or immediate delivery • Consider termination • Corticosteroids, MgSO4, GBS prophylaxis, and tocolysis not recommended before viability