Fern Testing

Amniotic Fluid Crystallization Test for Ruptured Membranes
Qualified Personnel

- Qualified Physicians
- Qualified Nurse Practitioners, Physician Assistants, Midwives
- Interns, residents and fellows enrolled in an ACGME approved training program may perform the Fern Test when supervised by a qualified, licensed provider.
Fern Testing

- Fern testing is considered Moderate in complexity by the FDA.

- **Purpose**: Detection of fern-type amnoidic fluid crystallization as an aid in the detection of ruptured amniotic membranes in pregnant women.
Equipment For Testing

- Bright Field Microscope
- Vaginal Speculum
- Sterile Cotton Swab
- Sterile Gloves
- Microscope Glass Slide
Specimen Collection

- A direct smear made from vaginal fluid is required.
- Fresh specimens should only be used.
- Obtain another specimen if the smear cannot be interpreted.
Specimen Labeling

- Specimen labeling is not required when testing is performed in the presence of the patient and only the sample from one patient is tested at a time.

- If there is the potential for specimen mix-up, the sample must be labeled with the patient’s full name and medical record number.
Patient Testing Procedure

- Insert vaginal speculum into the patient’s vagina.
- Using a sterile cotton swab, collect a sample of fluid from the vaginal fornix.
  - Avoid the cervix as cervical mucus will yield false positive results.
Patient Testing Procedure

- Roll the cotton swab on a clean glass microscope slide.
- Allow slide to air dry completely before examination under microscope.
  - A minimum of 10 minutes is preferred as it increases the sensitivity for detection of “ferning”
Patient Testing Procedure

- Examine the smear under the microscope without a coverslip.

- Use low power magnification (10x magnification).

- Dried amniotic fluid produces a microscopically visible crystallization in a “fern” pattern.

- Dried normal vaginal fluid does not produce a “fern” pattern.
Reporting Results

- Document results “fern pattern present or absent” in a designated place on the physical assessment form or on the progress record.
Limitations

- Fern testing is intended for use by qualified medical and nursing staff only as an aid to professional diagnosis and treatment.

- **False-positive results**: “Ferning” is not specific for amniotic fluid. Other fluids (e.g., blood, cervical mucus, semen and some urine specimens) when dried can also yield microscopic crystallization in a “fern” pattern.

- **False-negative results**: Prolonged rupture of membranes (greater than 24 hours) or slow, minimal leaks can yield false negative results.
For Further Questions or Information
Contact POCT Services

SFGH-POCT.org