SUNY DOWNSTATE MEDICAL CENTER
DEPARTMENT OF PATHOLOGY
POLICY AND PROCEDURE

☒ UNIVERSITY HOSPITAL OF BROOKLYN ☒ BAY RIDGE

Subject: VAGINAL WET MOUNTS

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PRINCIPLE

A vaginal wet mount is used to find the cause of vaginitis, or inflammation around the vagina. Vaginitis is often caused by an infection and this test may identify some of the most common organism under the microscope.

Many clinical specimens may be examined directly under the bright-field microscopy for Trichomonads, fungal elements and yeast cells. The addition of 10% KOH partially digests proteinaceous components, such as host cells, leaving fungal cell walls intact.

REAGENTS AND EQUIPMENT

- 10% KOH (potassium hydroxide)
- Sterile, physiologic saline
- Microscope
- Glass Slides
- Cover Slips

PROCEDURE/ GUIDELINES

- **Direct Wet Mount**:
  Specimen: **Vaginal Swab obtained from the posterior vaginal pool.**

1. Place fresh clinical material on a clean glass slide and gently cover with a cover slip. If material is too thick to read, dilute with an equal amount of sterile saline before placing on slide.
2. Use of a sterile swab and do not touch mucus plug
3. Prepare two thin smears on a glass microscope side by spreading evenly.
4. Add one drop of Normal Saline(0.9 percent NaCl to the drop of discharge. Mix well on the slide. This is the slide you will use for identifying Trichomonas and bacterial Vaginosis (BV)
5. Prepare a second slide in same way using 10 percent Potassium Hydroxide(KOH). This is the slide you will use to identify yeast.
6. Place glass cover slips over the glass slides. Remove any excess fluid with tissue paper.
7. In order for the KOH to be effective in dissolving the cell membranes of everything except yeast, you need to allow some. A minute or two may be enough.
8. If you are in hurry, you can speed the process by heating the slide with a match or lighter. The elevated temperatures will speed the dissolving process and glass slide cools quickly enough that you can place it under the microscope as soon as you've finished heating it.

- **Testing and Interpretation**:
  1. Examine the prepared slides under a microscope.
  2. Experienced practitioners often find the lowest power (about 40X) works the best. Others will start at low power and then move to slightly higher power (about 100X)
  3. **Yeast**- (Candida, Monilia) is best identified with the KOH slide.
  4. After the cell membranes are dissolved, the typical branching and budding yeast cell can be seen. Sometimes, it has the appearance of a tangled web of threads. At other times, only small branches will be seen.
  5. Yeast normally live in the vagina, but only in very small numbers. If you visualize
     a. any yeast in your sample, it is considered significant.
  6. **Trichomonas** is best seen on the Normal Saline Slide.
  7. These protozoans are about the same size as a white blood cell (alittle smaller than a vaginal epithelial cell), but their violent motion is striking and unmistakable.

8. **Bacterial Vaginosis** (also known as Gardnerella, hemophilus, or non-specific vaginitis) is characterized by the presence of “clue cells” visible at both low and medium power.
9. These clue cells are vaginal epithelial cells studded with bacteria. It resembles a pancake the ha fallen into a bowl of poppy seeds, but on a microscopic level.
10. A normal vaginal epithelial cell is clear, with recognizable contents, and sharp, distinct cell borders.
11. A clue cell appers smudged, with indistinct conts and fuzzy, poorly defined borders.

Note: Trichomonads will be destroyed by KOH.

Interfering Substances/Limitations:

If present, blood, urine cervical mucus can result in false positive findings.
False negative findings can result from prolonged rupture of membrane (>24hrs).
Quality Control:

- Follow the procedural instructions exactly.
- There are no external nor internal quality controls to be performed at the unit level.

Complexity of Testing:
Under CLIA’88 Vaginal Wet Mount are included in the Category. Provider Performer Microscopy PPM

Reporting:

- Report relative numbers of Trichomonads, yeast and fungal elements seen.
- If none are seen, report as “no yeast, fungal elements or protozoa seen”.

VI. REFERENCES

Finegold, S. and Baron, E., Bailey and Scott’s Diagnostic Microbiology, C.V. Mosby Co., St. Louis, Missouri, 7th Edition.
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