VAGINAL CULTURE

I. Introduction

Vaginal infections are occasionally caused by *Staphylococcus aureus* and beta-hemolytic streptococci (not *S. anginosus (milleri)* group), and in children, *Salmonella* and *Shigella*. Vaginal culture can be used for diagnosis. *Neisseria gonorrhores* and (GC) and *Chlamydia trachomatis* (CT) will also cause vaginal infections but vaginal swabs are not the optimal specimen to detect these agents.

Toxic-shock syndrome may be associated with vaginitis or vaginal colonization due to *S. aureus* and beta-hemolytic streptococci (not *S. anginosus (milleri)* group). Vaginal culture may be helpful; positive cultures should be tested to determine if they are toxin-producing strains.

II. Specimen Collection and Transport

See Pre-Analytical – Specimen Collection QPCMI2001 *Vaginal Swab for Culture*

III. Reagents and Media

See Analytical Process - Bacteriology Reagents/Materials/Media List QPCMI10001

IV. Procedure

A. Processing of Specimens:

See Specimen Processing Procedure QPCMI06003 *Vaginal Swab for Culture*

a) Direct Examination: not required

b) Culture:

<table>
<thead>
<tr>
<th>Media</th>
<th>Incubation</th>
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</thead>
<tbody>
<tr>
<td>Colistin Nalidixic Acid Agar (CNA)</td>
<td>CO₂, 35°C x 48 hours</td>
</tr>
<tr>
<td>Todd Hewitt Broth for Group B Strep(TH)</td>
<td>O₂, 35°C x 24 hours</td>
</tr>
<tr>
<td>Martin-Lewis Agar (ML) (if requested)</td>
<td>CO₂, 35°C x 72 hours</td>
</tr>
<tr>
<td>MacConkey (MAC) (for &lt;12 years old)</td>
<td>CO₂, 35°C x 48 hours</td>
</tr>
</tbody>
</table>
B. Interpretation of culture:

a) Examine the CNA plate after 24 hours incubation for colonies suspicious of *S. aureus*, beta-hemolytic streptococci (not *S. anginosus (milleri)* group) (Refer to Bacteria Workup Manual for identification). Send *S. aureus* isolates to PHL for toxin testing and freeze all toxin-producing strain.

b) If the original CNA plate has no suspicious colonies re-incubate and examine the next day.

c) After 24 hours incubation, if the original CNA plate is negative for beta-hemolytic streptococci (not *S. anginosus (milleri)* group), subculture a drop of GBS broth onto CNA and incubate in O₂ at 35°C x 24 hours.

d) Examine ML plate at 24 and 72 hours. For GC work-up, refer to Bacteria Workup Manual.

e) Examine MAC at 24 and 48 hours. Work-up oxidase-negative non-lactose-fermenters as per Bacteria Workup Manual.

C. Susceptibility testing

Refer to Susceptibility Testing Manual.

V. Reporting Results

Culture:

Negative Report: If toxic shock syndrome requested:
“No *Staphylococcus aureus* or beta-hemolytic streptococci isolated.”

If ML is set up:
“No *Neisseria gonorrhoeae* isolated”.

If vaginal swab is received for GC culture on adults, report with comment: “The recommended specimen for *Neisseria gonorrhoeae* culture is an endocervical swab.”

If MAC is set up:
Report “No Salmonella or Shigella isolated.”
Positive Report: If toxic shock syndrome requested:
Report all significant isolates with appropriate susceptibilities (do not quantitate).

If ML is set up:
"Neisseria gonorrhoeae isolated" (do not quantitate)

If MAC is set up:
Report all significant isolates with appropriate susceptibilities (do not quantitate).

Telephone all positive GC cultures to floor/ordering Physician. Refer to Isolate Notification and Freezing Table QPCMI15003

For all positive GC cultures, send a Communicable Disease Report to the Medical Officer of Health. Refer to Communicable Disease Results Reporting Process QPCMI16000 and Reportable Diseases to the Medical Officer of Health QPCMI16001.

VI. References


