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:

Media	Incubation
Colistin Nalidixic Acid Agar (CNA)	CO_2, 35°C x 48 hours
Todd Hewitt Broth for Group B Strep (TH)	O_2, 35°C x 24 hours
Martin-Lewis Agar (ML) (if requested)	CO_2, 35°C x 72 hours
MacConkey (MAC) (for <12 years old)	CO_2, 35°C x 48 hours

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 O_2 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

Schreckenberger, Paul. Clinical Microbiology Newsletter, 1992 p. 126.

Spiegel, C., Amsel, R., Holmes, K. Journal of Clinical Microbiology, July, 1983 p. 170-177.

Cumitech 17A, 1993. "Lab. Diagnosis of Female Genital Tract Infections, ASM Press.

QMP-LS Survey B-9412, Feb. 21, 1995. Microbiology Handling of Female Genital Specimens. A Pattern of Practice Survey.