UPPER GENITAL TRACT CULTURE –
Endometrial Swabs, Biopsies and Curettings, Placenta Swab/Tissue,
Products of Conception, Endometrial/Uterine, Cul de sac/Transvaginal,
Fallopian Tube, Tubo-Ovarian Swabs or Aspirates

I. Introduction

The microbiologic diagnosis of endometritis is difficult. Anaerobes play an important role in this infection. However, most cases of endometritis follow childbirth, and it has been demonstrated that in the postpartum period, whether or not there is endometrial infection, significant numbers of anaerobes and other organisms from the cervical and vaginal flora may be found in the uterine cavity.

Although any organism may cause infection of the placenta, the most common organisms associated with this syndrome include *S. aureus*, beta-hemolytic streptococci, *Listeria monocytogenes* and *E. coli*.

Upper genital tract specimens include endometrial/uterine, cul de sac/transvaginal, fallopian tube, tubo-ovarian swabs or aspirates. Organisms typically associated with infections of these sites include *Staphylococcus aureus*, beta-hemolytic streptococci, GC and CT.

If *Mycobacterium tuberculosis* (TB) examination is requested, send specimen to the Public Health Laboratory (PHL) for processing.

II. Specimen Collection and Transport

See Pre-Analytical – Specimen Collection QPCMI2001 *Upper Genital Specimens*

III. Reagents and Media

See Analytical Process - Bacteriology Reagents/Materials/Media List QPCMI10001
IV. Procedure

A. Processing of Specimens:

See Specimen Processing Procedure QPCMI06003 *Upper Genital Specimens*

a) Direct examination: Gram stain.

b) Culture:

<table>
<thead>
<tr>
<th>Media</th>
<th>Incubation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Agar (BA)</td>
<td>CO₂, 35°C x 48 hours</td>
</tr>
<tr>
<td>Chocolate Agar (CHOC)</td>
<td>CO₂, 35°C x 48 hours</td>
</tr>
<tr>
<td>Martin-Lewis Agar (ML)</td>
<td>CO₂, 35°C x 72 hours</td>
</tr>
<tr>
<td>MacConkey Agar (MAC)</td>
<td>O₂, 35°C x 48 hours</td>
</tr>
<tr>
<td>Fastidious Anaerobic Agar (BRUC)*</td>
<td>AnO₂, 35°C x 48 hours</td>
</tr>
<tr>
<td>Kanamycin-Vancomycin Agar (KV)*</td>
<td>AnO₂, 35°C x 48 hours</td>
</tr>
<tr>
<td>Fastidious Anaerobic Broth (THIO)*</td>
<td>O₂, 35°C x 48 hours</td>
</tr>
</tbody>
</table>

* If tissue/aspirate or anaerobic swab is received, add BRUC, KV and THIO.

For tissues and biopsies, freeze remaining tissue in the -70°C freezer for minimum of 3 months.

B. Interpretation of cultures:

a) Examine the BA, CHOC, and MAC plates after 24 and 48 hours incubation and the ML plate after 24, 48 and 72 hours incubation.

b) All potential pathogens should be identified. In particular, examine for any growth of *S. aureus*, beta hemolytic streptococci, *Listeria* and GC.

c) Work-up any organism(s) that is predominant (heavier than that of vaginal flora)

d) Work-up specific organism(s) that is requested.

e) Examine ML plate after 48 and 72 hours incubation. For GC work up, see Bacteria Workup Manual.

f) Examine the BRUC and KV plates after 48 hours incubation. Work-up up to 2 types of anaerobes. See Bacteria Workup Manual.

g) If no growth is visible on the culture plates, subculture the THIO (if turbid) onto CHOC (CO₂ at 35°C x 24 hours) and BRUC (AnO₂ at 35°C x 48 hours).

h) If *Actinomyces* is requested, keep plates for 7 days.
C. Susceptibility testing:

Refer to Susceptibility Testing Manual.

V. Reporting Results

Gram stain: Report with quantitation the presence of the pus cells and organisms.

Culture:

Negative Report: “No significant growth” or “No growth.”
“Neisseria gonorrhoeae isolated.”

If ML plate is overgrown by swarming Proteus or yeast, report ONLY as “Unable to rule out Neisseria gonorrhoeae due to bacterial/yeast overgrowth.”

Positive Report: Quantitate and report all other significant isolates with appropriate sensitivity results.

“Neisseria gonorrhoeae” “isolated” (do not quantitate)

For TB reports, Refer to Send-Out Manual.

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
