Diagnostic Ascitic Paracentesis (Tap) Sampling Standards

**Indications**

A routine diagnostic paracentesis (ascitic tap) should be performed PRIOR to starting antimicrobial therapy within 6 hours in all patients:

- with a clinical suspicion of SBP
- with cirrhosis and ascites on hospital admission,
- on the development of ascites,
- suffering gastrointestinal haemorrhage
- with cirrhosis on the development of any local (abdominal pain, reduced motility) or systemic symptoms (fever, sepsis) or signs (encephalopathy, renal impairment).

Diagnostic ascitic paracentesis is safe. Complications are 1% minor, e.g. abdominal haematoma, less than 0.1% major, e.g. bowel perforation. Coagulopathy is not a contraindication.

Ascites should be confirmed clinically with patient supine. Request an abdominal ultrasound to perform under USS guidance, or indicate appropriate site if the ascites cannot be demonstrated clinically.

**The following standard operating procedure is recommended:**

Prepare all the equipment required.

Remove the caps from the blood culture bottles and wipe the bottle tops with a sterile wipe containing 2% chlorhexidine in 70% isopropyl alcohol. Allow to air dry.

Identify the correct patient e.g. name band and verbally where possible and explain the procedure and obtain verbal consent where appropriate.

Wash hands with soap and water, then dry hands and put on disposable apron.

Identify the site as follows:

- Lower abdominal quadrant left or right, avoiding enlarged liver or spleen;
- Keep 15cms lateral to umbilicus to avoid epigastric arteries.
Clean the site using a 2% chlorhexidine in 70% isopropyl alcohol wipe. Apply the disinfectant by pressing the swab in the centre of chosen site. Then apply the disinfectant with a spiral outward motion from the centre of the site covering 1-2 finger breadth to each side. Allow to air dry (the drying process kills the bacteria).

Put on sterile examination gloves while skin disinfectants dry.

Attach a green needle (21G) to a 20ml syringe.

Perform the ascitic tap and withdraw 20-25ml of ascitic fluid.

Place a swab or cotton wool over the site and apply gentle pressure while withdrawing the needle. Press firmly over the site if bleeding occurs.

Decant the fluid into the sample tubes as in the table below:

<table>
<thead>
<tr>
<th>Test</th>
<th>Tube</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>White cell count (WCC) and differential</td>
<td>EDTA tube</td>
<td>Haematology</td>
</tr>
<tr>
<td>Culture &amp; susceptibility.</td>
<td>Universal container &amp; blood culture bottles</td>
<td>Microbiology</td>
</tr>
<tr>
<td>Protein, albumin, LDH, pH (amylase)</td>
<td>Li-Hep Yellow tube or universal container</td>
<td>Biochemistry</td>
</tr>
<tr>
<td>Cytology</td>
<td>Universal container</td>
<td>Pathology</td>
</tr>
</tbody>
</table>

The use of blood culture bottles increases the yield of ascitic fluid culture. 8 to 10mls of fluid must be transferred into each blood culture bottle. Fill aerobic bottle first then the anaerobic. DO NOT change needle between sample collection and inoculation.

Discard needle and syringe into a sharps bin.

Write patient details and clinical information on all sample bottles according to Trust policy.

Wash hands with soap and water, then dry hands.

Arrange transport of the sample to the laboratory.

Ensure that sampling details and any subsequent positive results communicated by the laboratories are accurately documented in the patient’s notes and advice is acted on.
Guideline provenance:

Guideline proposed by Dr Jason Jennings, Leeds General Infirmary (now SJUH, Leeds), at Network meeting April 2010 as part of SBP guidance in cirrhosis. Adopted as WEYHN and YHLN guidance with name changes in 2010 and 2012 respectively. Review date October 2013.