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All Provincial Directors of Health Services / Regional Directors of health Services,
Directors of Teaching Hospitals / Provincial General Hospitals
Medical Superintendents of District General / Base Hospitals
All Heads of Line Ministry Health Institutions
All Consultants

Laboratory Diagnosis of Human Leptospirosis

Leptospirosis is a treatable but potentially fatal zoonotic infectious disease. High case fatality has been observed in the recent past. Early detection and specific management results in better outcomes for these patients.

National Reference Laboratory for Leptospirosis, Department of Bacteriology at the Medical Research Institute (MRI), offers special diagnostic tests to the entire country. For best results the clinicians should be aware of the choices of tests, timing of sample collection and transport conditions.

Therefore, this guideline for the ‘Collection and Transport of specimen for the Diagnosis of Leptospirosis’ was issued to create awareness and to provide information on the currently available diagnostic tests for leptospirosis in Sri Lanka.

PTO/
# Guideline for Collection and Transport of Specimens for the Diagnosis of Leptospirosis to Medical Research Institute

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<th>Laboratory Test</th>
<th>Right Specimen to collect</th>
<th>Best time for collection</th>
<th>Transport conditions</th>
<th>Turn-around-time</th>
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<td><strong>Culture for Leptospira</strong></td>
<td>Fresh blood: 2 drops in to EMJH medium OR 5mL whole blood (EDTA) CSF: 0.5 mL in sterile screw capped bottle</td>
<td>Within 7 days of start of illness and before starting antibiotics</td>
<td>At room temperature, dark place without direct exposure to sunlight</td>
<td>We immediately inform ward by telephone, when growth is present.</td>
<td>Blood for culture should not be done when disease onset is more than 10 days</td>
</tr>
<tr>
<td><strong>PCR for Leptospira</strong></td>
<td>3mL whole blood in EDTA OR clotted blood /serum CSF: in plain sterile bottles</td>
<td>Within 7 days of start of illness</td>
<td>Ideally, whole blood +4°C / serum</td>
<td>24 - 48 hours</td>
<td>After 7 days, consider antibody tests</td>
</tr>
<tr>
<td><strong>Microscopic Agglutination Test (MAT)</strong></td>
<td>5 mL clotted blood OR 3 mL serum, collected into plain sterile bottle</td>
<td>1st sample: After 7th day of illness 2nd sample: 10-14 days after the 1st sample</td>
<td>Room temperature</td>
<td>48 Hours</td>
<td>‘Serological Reference test’ A negative antibody result in early illness does not exclude leptospirosis</td>
</tr>
<tr>
<td><strong>ELISA</strong> - IgM</td>
<td>3-5 mL clotted blood in sterile plain bottle</td>
<td>After 3-5 days of illness</td>
<td>Room temperature</td>
<td>Within 48 hours</td>
<td>For early ‘presumptive’ diagnosis. Should confirm by MAT</td>
</tr>
<tr>
<td><strong>Postmortem specimens</strong></td>
<td>Samples should be collected aseptically as soon as possible after death. They should be inoculated into culture media immediately, or keep in +4°C for serological tests or PCR.</td>
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</tbody>
</table>

*ELISA - Enzyme-Linked Immunosorbent Assay, RT - room temperature
Guideline for the collection and transport of specimens for the diagnosis of leptospirosis

Please note:

1. Confirmed case of leptospirosis is defined as suspected patient with a positive result by MAT, PCR or culture ONLY.
2. A short clinical history (symptoms, duration, complications if any, whether the patient received prophylactic antibiotics) with risk of exposure and occupation should be included in the request form. Duration of fever at the time of request for the test is very important.
3. Since all the above tests are special tests, if the clinical history is not available in the request form, the results will be delayed.
4. Selection of the test should be based on the duration of the illness of the patient.
5. Collect the tubes with culture medium for leptospira from room no. 344, Department of Bacteriology, 2nd floor, MRI
6. A duly filled request form such as MRI Health 275 or Health 359 should accompany the specimen.
7. The specimen receiving counter at MRI is open 24 hours, 7 days.
8. Collect the reports from the receiving counter. For urgent results, contact MRI Ext - 344. Reports can be sent by email or fax on request.

For Further Information, Please Contact:

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