



Epidemiology Unit
Ministry of Health, Nutrition & Indigenous Medicine

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All Provincial Directors of Health Services/ Regional Directors of Health services
Directors of Teaching Hospitals/ Provincial and District General Hospitals
Medical Superintendents of Base Hospitals

Strengthening Human Leptospirosis Laboratory Surveillance

The Epidemiology Unit of the Ministry of Health has observed the gradual increase of Leptospirosis reported cases through the routine surveillance system with the commencement of the paddy cultivation season.

However, it has been revealed that most of the reported cases were diagnosed on clinical ground despite the availability of laboratory diagnostic methods at the Medical Research Institute (MRI).

National Reference Laboratory for Leptospirosis, Department of Bacteriology of the MRI offers special diagnostic tests for diagnosis of Human Leptospirosis.

It would be much appreciated if you could please make necessary arrangements to make aware the health staff in your institution on the above and ensure the laboratory diagnosis of each and every suspected leptospirosis cases.

A copy of the General Circular on Laboratory Diagnosis of Human Leptospirosis issued by the Director General of Health Services is also attached hereto for your easy reference and necessary arrangements.

Thank you,


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சுகாதார, போசணை மற்றும் சுதேச வைத்திய அமைச்சு
Ministry of Health, Nutrition & Indigenous Medicine

General Circular No. 01 - 51 / 2018

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 Insitutions
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 outcome for these patients.

National Reference Laboratory for Leptospirosis, Department of Bacteriology of 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.

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

Laboratory Test	Right Specimen to collect	Best time for collection	Transport conditions	Turn-around-time	Comments
Culture for Leptospira Important to detect local antibiotic resistant strains Inoculate at the bedside into the enrichment media under strict aseptic condition	Fresh blood: 2 drops in to EMJH medium OR 5mL whole blood (EDTA) CSF: 0.5 mL in sterile screw capped bottle	Within 7 days of start of illness and before starting antibiotics	At room temperature, dark place without direct exposure to sunlight	We immediately inform ward by telephone, when growth is present. Negative report issued after 6 weeks of incubation.	Blood for culture should not be done when disease onset is more than 10 days Large volume of blood into culture tubes may inhibit the growth of leptospira
PCR for Leptospira	3mL whole blood in EDTA OR clotted blood /serum CSF: in plain sterile bottles	Within 7 days of start of illness Within 10 days of start of illness	Ideally, whole blood +4°C / serum	24 - 48 hours	After 7 days, consider antibody tests
Microscopic Agglutination Test (MAT)	5 mL clotted blood OR 3 mL serum, collected into plain sterile bottle	1 st sample: After 7 th day of illness 2 nd sample 10-14 days after the 1 st sample	Room temperature	48 Hours Results can be given within 24 hours over the phone	'Serological Reference test' A negative antibody result in early illness does not exclude leptospirosis
ELISA* - IgM	3-5 mL clotted blood in sterile plain bottle	After 3-5 days of illness	Room temperature	Within 48 hours	For early 'presumptive' diagnosis. Should confirm by MAT
Postmortem specimens	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.				

*ELISA - Enzyme-Linked Immunosorbent Assay, RT - room temperature



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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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Department of Bacteriology

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