

Screening and Diagnosis Algorithm for Extrapulmonary Tuberculosis for Adults

Does the client have any one or more of the following signs and symptoms?

TB Signs and symptoms in Adults and Children

1. Cough of any duration
2. Persistent fever (Temperature > 37.5°C)
3. Drenching night sweats
4. Unexplained weight loss
5. Chest pain
6. Difficulty in breathing
7. Fatigue (lethargy)
8. History of contact with a person with TB or chronic cough

Other TB Sign in adults

1. Body Mass Index (BMI) <18.5

Other TB Signs and symptoms in Children

1. Poor weight gain or faltering of the growth curve
2. Z-score < -2 (for weight-for-age or height-for-age)
3. Reduced playfulness / less active (lethargy)

NO

Evaluate for other conditions and manage appropriately. Evaluate for TPT eligibility

YES

Investigate appropriately for EPTB. Treat for DSTB or DRTB as per the guidelines

SYMPTOMS, SIGNS & INVESTIGATIONS FOR EPTB

Site of EPTB	Symptoms and signs for EPTB specific to the affected site	Investigation
TB lymphadenitis (cervical, axillary, or inguinal LN)	<ul style="list-style-type: none">• Lymph node enlargement for more than one month.• Painless, non-tender, often asymmetrical• With or without caseous (cheese-like) discharge• *It's most commonly in the neck area	<ul style="list-style-type: none">• Fine needle aspiration (FNA) for:• Xpert, culture• Microscopy - predominance of lymphocytes, AFB• Lymph node biopsy - Histology
Pleural TB	<ul style="list-style-type: none">• +/- Chest pain is often one-sided• +/- Cough• Large effusion - fast breathing, breathlessness• Dullness on percussion, reduced breath sounds on the affected side	<ul style="list-style-type: none">• CXR• Chest ultrasound• Pleural tap1
TB meningitis	<p>Persistent CNS symptoms:</p> <ul style="list-style-type: none">• Early signs - Persistent headache, irritability/abnormal behaviour, one-sided weakness, changing gait, blurred vision, squint (signs progressively worsening over weeks)• Late (severe) signs - reduced level of consciousness, convulsions, neck stiffness, bulging fontanelle, cranial nerve palsies.	<ul style="list-style-type: none">• Lumbar puncture - CSF1• CT scan brain with contrast• Cranial ultrasound in infants <6 months with an open anterior fontanelle
Miliary TB	<ul style="list-style-type: none">• Non-specific signs: persisting fever, weight loss/poor weight gain, lethargy.• Often have respiratory symptoms s signs (fast breathing, +/- cough, wheeze, respiratory distress)	<ul style="list-style-type: none">• CXR - diffuse miliary opacities (micronodules)• Fundoscopy - see micro-nodules on retina• High risk for other extrapulmonary sites; look for other lesions.
Abdominal TB	<ul style="list-style-type: none">• Abdominal pain >2 weeks• Progressive swelling of the abdomen over several weeks.• Exam: Abdominal swelling, ascites (shifting dullness, fluid thrill.	<ul style="list-style-type: none">• Ascitic tap1• Abdominal ultra-sound2
Spinal TB	<ul style="list-style-type: none">• Persistent pain in a focal point in the back.• Early sign: Tender/pain when applying pressure to the part of the spine, loss of lordosis / reduced curvature in the lower back if located in the lumbar vertebrae.• Advanced disease:• Deformity of the spine• Progressive lower limb weakness	<ul style="list-style-type: none">• X-ray of the affected spine - lateral and antero-posterior views.
Pericardial TB	<ul style="list-style-type: none">• Breathless with minimal exertion, palpitations (feeling of rapid heartbeat), and cough may be present• Cardiac failure (tachycardia, pedal oedema, infants - periorbital puffiness• Distant heart sounds• Apex beat is difficult to palpate	<ul style="list-style-type: none">• CXR - global enlargement of the heart.• Echocardiogram (Cardiac ultrasound). Pericardial tap

1. Cerebrospinal fluid (CSF), pleural fluid, ascitic fluid specimens, joint fluid - the following findings are suggestive of TB: Colour - clear or light yellow colour. Bio chemistry - high protein and low glucose Microscopy - increased white cell counts, predominantly lymphocytes. (note that bacteriologic tests rarely detect MTB from these body fluids).
2. Abdominal ultra-sound shows ascites +/- septation, enlarged abdominal lymph nodes

All specimens (FNA, CSF, aspirates etc.) may be sent for bacteriologic tests such as GeneXpert, AFB microscopy or TB culture as appropriate, however detection rate is lower than sputum