TB LAM DIAGNOSTIC ALGORITHM

health
Department:
Health
REPUBLIC OF SOUTH AFRICA

2030 NDP

SETTING	ADMITTED, HOSPITALISED SETTING	CLINIC, OUTPATIENT SETTING, AND PATIENT AMBULATORY AND WITH SIGNS AND SYMPTOMS OF TB
STEP 1 Assess for TB signs and symptoms	All hospitalised patients are considered seriously ill. Proceed with collection of urine for LF-LAM.	**If CD4 count is ≤200 and results are not older than 6 months, perform LF-LAM.** If no CD4 count is available, this should be requested. Patients who have advanced disease and/or are seriously ill should receive LF-LAM. **IF CD4 >200, patient is not eligible for LF-LAM**
STEP 2 Perform LF-LAM test. Where possible, collect sputum and perform GeneXpert concurrently.	1. Collect urine for LF-LAM test 2. Collect sputum or any suitable specimen (e.g. CSF, lymph node aspirate, etc.) for testing on GeneXpert Ultra 3. Conduct additional clinical evaluations for TB (initiate treatment with broad-spectrum antibiotics but not fluoroquinolones for bacterial infections, consider treatment for Pneumocystis pneumonia, conduct chest X-ray (CXR) if available)	
STEP 3 Interpret LF-LAM Result	**LF-LAM POSITIVE** **Start patient on TB treatment (first-line treatment). Review GeneXpert Ultra Result**	**LF-LAM NEGATIVE** **Review GeneXpert Ultra result**
STEP 4 Review GeneXpert Result to determine clinical management response	If GeneXpert-positive, review resistance pattern **MODIFY TREATMENT REGIMEN ACCORDING TO GENEXPERT ULTRA RESULTS** If Rifampicin-resistant, follow MDR-TB treatment and clinical guidelines (2019)	**If GeneXpert-negative, consider one or more of the following options:** 1. Send sputum/non-sputum sample for TB culture and DST to rule in DR-TB. Culture and DST should be requested whenever biological samples can be obtained (if not initially available) and appropriate specialist consultation should be sought if there is poor response to TB treatment. 2. Commence antibiotics for bacterial chest infection if appropriate. 3. Perform CXR and, in inpatients, abdominal ultrasound – start empiric TB treatment if these are suggestive of TB. 4. Consider PCP if dyspnoea is a prominent symptom, if respiratory rate >30/min, or if CXR shows an interstitial infiltrate. 5. Defer treatment while awaiting cultures if patient is stable and radiological investigations do not suggest TB. Ensure patient follow up.	If GeneXpert-positive, review resistance pattern **MODIFY TREATMENT REGIMEN ACCORDING TO GENEXPERT ULTRA RESULTS** If Rifampicin-resistant, follow MDR-TB treatment and clinical guidelines (2019)

KEY DEFINITIONS

Advanced HIV disease (AHD) is defined as a CD4 cell count of fewer than 200 cells/μL or a WHO clinical Stage 3 or 4 at presentation for care. All children with HIV who are aged under 5 years should be considered as having AHD at presentation. However, it should be noted that children under 5 years who are stable on ART should not be classified as having AHD.

Seriously ill patients (adult norms) are defined based on four danger signs: respiratory rate of more than 30 breaths per minute, a temperature of more than 39 °C, heart rate of more than 120 beats per minute, inability to walk unaided and a low BMI (<18.5) and/or severely underweight or wasted.

For children, signs of serious illness include lethargy or unconsciousness, convulsions; unable to drink or breastfeed; and repeated vomiting. Other clinical conditions such as body temperature ≥39 °C and age-defined tachycardia and/or tachypnoea can be considered based on clinical judgement (WHO 2017, Guidelines for managing AHD and rapid initiation of ART).