TYPHOID AND ENTERIC FEVER;DIAGNOSIS: WHAT NOT TO USE AND TEST

Topic: TYPHOID AND ENTERIC FEVER | Subtopic: DIAGNOSIS: WHAT NOT TO USE AND TEST

SELECTION BY ILLNESS STAGE Serologic testing (including the Widal agglutination test) is a major pitfall in enteric fever diagnosis. In endemic settings, background antibody titers and cross-reactivity lead to false positives, while early illness and prior antibiotics lead to false negatives. As a result, national guidance discourages using a single Widal result to confirm or exclude typhoid; if serology is used at all because culture is unavailable, a paired, rising titer is more meaningful than a single sample, but it rarely informs acute decision-making. Many rapid antibody kits have variable performance and should not override clinical assessment or culture results. Molecular tests (PCR) and other novel assays exist, but they are not yet standard in routine care because of cost, variable availability, and limited programmatic validation. Test selection should follow illness stage. In the first week, prioritize blood culture and targeted tests for common alternative febrile illnesses (for example malaria or dengue, depending on local epidemiology). Between days 5 and 14, blood culture remains useful; if cultures are repeatedly negative but suspicion remains high, consider bone marrow culture in selected cases. Stool and urine cultures are not first-line for diagnosing acute disease but may become positive later and are more useful for outbreak investigations and carrier detection. In late or complicated illness, testing should pivot toward detecting complications while still attempting culture confirmation, and avoid broad “shotgun” panels that do not change management.

References:

1. National Treatment Guidelines for Antimicrobial Use in Infectious Diseases (India) — Enteric fever section (NCDC) — https://ncdc.mohfw.gov.in/wp-content/uploads/2025/08/NTG-Version-31st-July-final.pdf
2. Typhoid fever: control & challenges in India (review, PMC) — https://pmc.ncbi.nlm.nih.gov/articles/PMC6977362/
3. Typhoid Fever — StatPearls (NCBI Bookshelf) — https://www.ncbi.nlm.nih.gov/books/NBK557513/
4. The treatment of enteric fever (review, PMC) — https://pmc.ncbi.nlm.nih.gov/articles/PMC1847736/