TYPHOID AND ENTERIC FEVER;ANTIMICROBIAL RESISTANCE AND STEWARDSHIP

Topic: TYPHOID AND ENTERIC FEVER | Subtopic: ANTIMICROBIAL RESISTANCE AND STEWARDSHIP

Antimicrobial stewardship is central to enteric fever management in India because resistance patterns evolve and directly affect empiric therapy. Resistance should be suspected when a child has received appropriate doses with good adherence yet shows no meaningful clinical improvement by day 5–7, or when culture demonstrates non-susceptibility. Clinicians should actively engage the microbiology laboratory: ensure susceptibility testing is performed for relevant agents and request MIC values when available, since “susceptible” categories may mask reduced susceptibility that correlates with slower response or failure. Fluoroquinolone resistance and reduced susceptibility are common, so empiric fluoroquinolones are generally avoided in children. If ceftriaxone susceptibility is reduced and the child is clinically stable, azithromycin is often the preferred option when the organism is susceptible. If the child is severely ill, deteriorating, or culture confirms ceftriaxone-resistant or extensively drug-resistant typhoid, escalation to a carbapenem such as meropenem (for example, 40 mg/kg every 8 hours) is appropriate, ideally guided by specialist input. Reserve carbapenems for proven or strongly suspected resistance to preserve their utility. Once culture results are available and the child is improving, de-escalate to the narrowest effective oral agent to complete the course. Stewardship also includes avoiding treatment of non-typhoidal fevers based on unreliable serology and ensuring full-course completion to reduce relapse and ongoing transmission.

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. ICMR Treatment Guidelines for Antimicrobial Use in Common Syndromes in India (2019) — https://www.icmr.gov.in/icmrobject/custom_data/pdf/resource-guidelines/Treatment_Guidelines_2019_Final.pdf
3. Antimicrobial susceptibility trends of Salmonella Typhi and Paratyphi in post-COVID-19 pandemic India (Scientific Reports) — https://www.nature.com/articles/s41598-025-93170-7
4. Typhoid fever: control & challenges in India (review, PMC) — https://pmc.ncbi.nlm.nih.gov/articles/PMC6977362/