Salmonella Typhi With Decreased Drug Resistance

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Dear Sir,

Typhoid fever is of worldwide concern, especially in developing countries where it is endemic. Strains of S. Typhi resistant to first-line antibiotics viz. chloramphenicol, ampicillin and trimethoprim-sulphamethoxazole became prevalent in some Asian countries during the late 1980s and early 1990s and emerged as a significant therapeutic problem[1]. For treatment of typhoid fever resistant to these drugs, fluoroquinolone was considered as an effective agent. With the increased use of fluoroquinolone to treat enteric fever, strains of S. Typhi with reduced susceptibility to ciprofloxacin had emerged in the Indian subcontinent, southern Asia and sub-Saharan Africa and had been associated with clinical treatment failure. Testing of isolates for resistance to the first-generation quinolone nalidixic acid detects most but not all strains with reduced susceptibility to ciprofloxacin. Patients infected with nalidixic acid resistant (NAR) S. Typhi strains should be treated with ceftriaxone. Ceftriaxone, cefotaxime and (oral) cefixime are effective for treatment of enteric fever, including NAR and fluoroquinolone-resistant strains[2]. In recent years there have been several reports indicating the re-emergence of susceptibility to drugs used in the past, such as chloramphenicol[1]. Here we present antibiotic susceptibility of S. Typhi isolates in our set up.

Total 20 blood culture isolates of S. Typhi from a tertiary care centre were subjected to antibiotic susceptibility testing by disk diffusion technique as per Clinical and Laboratory Standards Institute 2012 guidelines[3]. All the isolates were found susceptible to cefotaxime. Eighteen strains were found susceptible to ciprofloxacin of which five were resistant to nalidixic acid resulting in sensitivity as low as 65%. Chloramphenicol susceptibility was observed in as many as 18 strains (90%). Susceptibility to ampicillin and cotrimoxazole was found to be 45% and 50% respectively. Kumar et al[1] in their recent study reported higher susceptibility of S. Typhi to chloramphenicol (95.3%), ampicillin (94.5%) and trimethoprim (94.5%). In present study, the susceptibility of S. Typhi is in accordance with the recent report of decrease in multidrug resistant isolates[4]. Hence, once again these drugs can be used for the treatment of typhoid fever.

In conclusion, the findings of the present study indicate that first-line antibiotics might be an effective component in the treatment of enteric fever. Also, increasing resistance to quinolones is alarming and of particular concern.

References:

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