

# **Present status of Antibiotic Susceptibility Pattern of Salmonella Typhi Isolates at a tertiary care hospital in Karachi**

Dear Madam, Typhoid fever remains a serious infectious disease in Pakistan, where the problem of multi-drug resistance leads to increased morbidity and mortality<sup>1</sup>. Prevalence of multi drug resistance Salmonella typhoid (MRST) increased from 12.14% in 1987 to 75.41% in 1995 in Pakistan<sup>2</sup>. A study was conducted at the Department of Pathology, PNS Shifa (Naval Hospital) to know the present status of antibiotic susceptibility of tile Salmonella typhoid isolates. Four hundred and twelve cases were confirmed having typhoid during January 1996 to April 1999 as Salmonella typhoid strains were isolated from their blood cultures. These included 135 in 1996, 133 in 1997, 124 in 1998 and 20 in 1999. Majority of the typhoid cases were male (n=278) and the rest (ii= 134) were female. The age range of the patients was from six months to 66 years. Susceptibility of the isolates to CAP, AMP and COT was 60.74% in 1996, 70.67% in 1997, 66.12% in 1998 and 75% in 1999. Susceptibility to cefixime (CFM) was 100% in 1996, 95.45% in 1997, 96.77% in 1998 and 90% in 1999. Overall 3% of tile isolates were resistance to CFM. All the strains remained susceptible to cefotaxime, ceftriaxone and ciprofloxacin during these years. We have observed a gradual reversal of susceptibility to the conventional anti-typhoids from 60.74% in 1996 to 75% in 1999. This is probably because of the lesser use of the conventional drugs for the treatment of typhoid fever. CFM is considered to be a safe, effective and cheap drug for the treatment of typhoid fever<sup>1</sup>. But now resistance to it has emerged in 1997 and is increasing gradually over tile ensuing years. This has probably happened because of over use of this drug during these years. Quinolones are considered the first line drugs for the treatment of typhoid fever these day. But quinolonc (Nalidixic acid) resistant Salmonella typhi have been reported in Vietnam<sup>3</sup>. Resistance to CIP has also been reported in one non-typhoidal salmonella isolates<sup>4</sup>. So it is of paramount importance to limit the unnecessaiy use of these drugs so that efficacy of these is not further jeopardised. In areas with high prevalence of MRST, empirical treatment with one of the quinolones or a third generation cephalosoporins is recommended<sup>5</sup>. We still agree with this recommendation but with the reversal of susceptibility to the conventional anti-typhoid, these should be started empirically at least in clinically less severe cases of typhoid fever and those presenting at an early stage. Moreover blood for cultures from all the cases should be collected before the start of antibiotics, and if the isolate is found resistant, the treatment should be changed to one of the quinolones or a third generation cephalosporins. This will help in preventing the further emergence of drug resistance.

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## **References**

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