Salmonella Typhi: A Changing Sensitivity Pattern

Dear Editor,

This is with reference to the original article titled "Outbreak of Multi-drug Resistant Salmonella Typhi Enteric Fever in Mumbai Garrison". (MJAFI 2005; 61: 148-50). We have the following comments on the original article:

1. The authors must be congratulated for their epidemiological investigation and tracing the source of infection to water from a water well. This reminds one of the classic investigation of cholera epidemic in 1854 by Dr John Snow in the Golden Square District of London where the source of infection was localized to a common water pump.
2. The authors have reported uniform resistance of *Salmonella typhi* to ampicillin, chloramphenicol and septran (multi drug resistant strains). This study was carried out in November-December 2000. There has been a change in sensitivity patterns of *S typhi* since then. Increasing sensitivity is being reported to chloramphenicol [1]. This is related to the change in pattern of antibiotic usage. At our center, we have had 52 cases of culture positive enteric fever in patients below 18 years (pediatric population) in 2003 and 2004. Of these, *S typhi* was grown in 30 cases and *S paratyphi A* was grown in 22 cases. The sensitivity of *S typhi* to chloramphenicol, ampicillin, septran, gentamicin, ciproflox was 93%, 86%, 93%, 100%, 83% and

100% respectively. The sensitivity of *S paratyphi A* to chloramphenicol, ampicillin, septran, gentamicin, ciproflox and cephalixin was 100%, 81%, 100%, 72% and 100% respectively. A similar pattern of increasing sensitivity to chloramphenicol and resistance to ciproflox is also being reported in other Indian studies (2,3). A rotation of antibiotics and usage of antibiotics based on sensitivity patterns of *S typhi* will help in preventing a reemergence of outbreaks of MDRST (multi drug resistant *S typhi*).

References

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3. Gautam V, Gupta NK, Chaudhary U, Arora DR. Sensitivity pattern of Salmonella serotypes in Northern India. Braz J Infect Dis. 2002; 6: 281-7.

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Reply

1. I thank the reader for going through the article carefully and making valuable observations.
2. After careful epidemiological investigation and pin pointing source, the epidemic could be contained.
3. Multi-drug Resistance (MDR) strains were seen during the epidemic. As there was a single source, it was possibly a single plasmid containing strain of same phage type. However during subsequent period i.e. 2003-2005 in this hospital MDR strains were not isolated. During 2003, out of 32 isolates of salmonella only 13 isolates showed single drug resistance (4 to

chloramphenicol, 9 to Ampicillin). During 2004 there were 97 isolates of salmonella out of which 16 showed resistance to single drug (chloramphenicol – 4, Ampicillin – 9, and cotrimoxazole – 3). Till June 2005, 23 salmonella were isolated and all are sensitive to primary drugs. This definitely shows a improvement in trend and chloramphenicol is again emerging as a drug of choice for enteric fever.

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