Trend of multi drug resistant typhoid in South India

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ABSTRACT

Multidrug-resistant typhoid fever (MDRTF) is defined as typhoid fever caused by S. Typhi strains which are resistant to all the three first-line recommended drugs for treatment, i.e., chloramphenicol, ampicillin, and co-trimoxazole (TMP-SMX). A recent multi-centric study conducted across five Asian countries (China, India, Indonesia, Pakistan, and Vietnam) that are endemic for typhoid reported the prevalence of multidrug-resistant Salmonella typhi strains ranging from 7% to 65%.

Keywords: Multi drug-resistant, Typhoid, Chloramphenicol, Ampicillin, Co-trimoxazole

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A recent multi-centric study conducted across five Asian countries (China, India, Indonesia, Pakistan, and Vietnam) that are endemic for typhoid reported the prevalence of multidrug-resistant S. typhi strains ranging from 7% to 65%.1

Recently, several studies have found that strains previously resistant to the first-line drugs (chloramphenicol, ampicillin and co-trimoxazole) are now showing decreasing resistance.2,4 The withdrawal of selective pressure has probably resulted in the re-emergence of sensitivity to these first-line drugs. A study done by Gupta et al found a very high sensitivity of 93.2%, 86.2% and 71.3% with chloramphenicol, co-trimoxazole and ampicillin, respectively.5 Similarily, a re-emergence of chloramphenicol sensitivity was reported by Prajapati et al.6

Figure 1: Trend of multi drug resistant typhoid in South India.

Multi drug resistance trend was evaluated from the data of a prospective cross sectional study conducted at Kanchi Kamakoti Childs Trust hospital from 2013-2014 by comparing the previous studies with our study. In a
A study done in CMC Vellore, Tamilnadu, multi drug resistance was found to be 45% in the year 1999-2002. A study done in JIPMER, Pondicherry found it to be 61%. The MDR Typhoid occurrence was found to be 12% in a study done in Chennai, Tamilnadu. In 2009-2011 the occurrence in Chennai was 0%. In our study which was conducted in Chennai, the MDR Typhoid occurrence has been found out as 0.95%.

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