

Brief Report

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Trend of multi drug resistant typhoid in South India

Karthik Prabhu Ramaraj*, Ganesh R, Lalitha Janakiraman

Department of Pediatrics, Kanchi Kamakoti Childs Trust Hospital, Nungambakkam, Chennai, India

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***Correspondence:**

Dr. Karthik Prabhu Ramaraj,

E-mail: arkarthikpollachi@gmail.com

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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

Multidrug-resistant typhoid fever (MDRTF) is defined as typhoid fever caused by *Salmonella 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 *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.² Similarly, a re-emergence of chloramphenicol sensitivity was reported by Prajapati et al.³

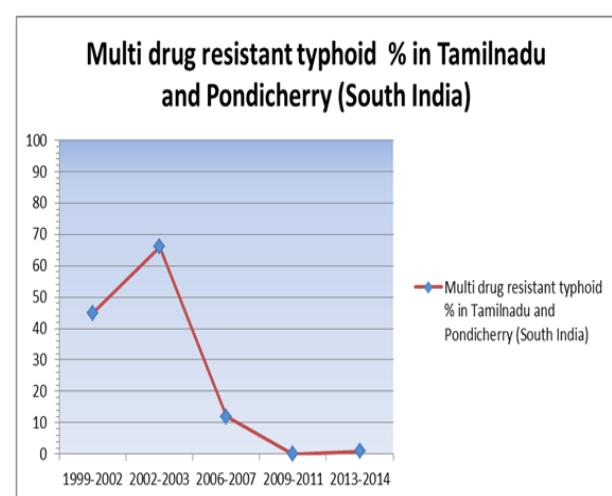


Figure 1: Trend of multi drug resistant typhoid in South India.

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

study, done in CMC Vellore, Tamilnadu, multi drug resistance was found to be 45% in the year 1999-2002.⁴ A study done in JIPMER, Pondicherry found it to be 61%.⁵ The MDR Typhoid occurrence was found to be 12% in a study done in Chennai, Tamilnadu.⁶ In 2009-2011 the occurrence in Chennai was 0%.⁷ In our study which was conducted in Chennai, the MDR Typhoid occurrence has been found out as 0.95%.

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