

Prevalence and Antimicrobial Profile of *Shigella* Isolates in a Tertiary Care Hospital of North Karnataka: A 12-Year Study

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Abstract

Context: *Shigella* is a common cause of bacillary dysentery. Although it is reported worldwide, the majority of the infections are seen in developing countries with *Shigella flexneri* being the most common isolate. Prevalence of *Shigella* species and their antibiotic susceptibility profiles vary according to geographic area and season. **Aims:** In the present study, the epidemiology and antimicrobial profile of *Shigella* from stool samples received at our hospital for a period of 12 years (January 2006 to December 2017) was evaluated. **Subjects and Methods:** A total of 4578 stool samples were collected from the cases of acute gastroenteritis and diarrhoea. Samples were processed for culture and sensitivity according to standard microbiological techniques. The presumptive identification of *Shigella* species was done using standard conventional biochemical tests and confirmed using antisera. **Results:** A total of 189 (4.2%) samples yielded *Shigella* spp. Isolation of *Shigella* spp. were more frequent from males (58.2%). *S. flexneri* was the commonest species isolated (47.6%) followed by *Shigella sonnei* (11.6%), *Shigella dysenteriae* (4.2%) and *Shigella boydii* (2.1%). Non-typeable *Shigella* was commonly recovered. The isolates showed high resistance to ampicillin (76.7%) and co-trimoxazole (75%) while highest susceptibility was observed to ceftriaxone (79.2%). **Conclusions:** *S. flexneri* was the most prevalent species isolated at this centre. *Shigella* isolates from the study showed alarming resistance to recommended antibiotics. Non-typeable *Shigella* accounted for 34.4% isolates. Molecular discrimination between *Shigella* and *Escherichia coli* is essential.

Keywords: *Shigella*, *Shigella flexneri*, non-typeable *Shigella*

The primary mode of transmission of this highly infectious pathogen is faeco-oral and as low as 10–100 bacilli may initiate a clinical infection.^[3] *Shigella* colonises and invades the

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