

OA_Emerging Trends of Antibiotic Resistance pattern of Salmonella Typhi

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Abstract:

Introduction: Salmonella typhi is the major serotype of Salmonella accountable for enteric fever. Emergence of antimicrobial resistance limits the available treatment options for enteric fever and is one of the foremost contributors to the increase in morbidity and mortality rates.

Materials and Methods: This was cross-sectional study conducted at Dow University of Health Sciences over a period of 6 years, between January 2010 to December 2016. Blood samples were collected and incubated in Bact/Alert automated system (bio-Merieux). The isolates were identified and characterized by standard and specific methods. Antibiotic susceptibility of all isolates was assessed by the Kirby-Bauer disc diffusion method according to the guidelines of Clinical and Laboratory Standards Institute (CLSI).

Results: During the period of 2010 to 2013, the highest frequency of S. typhi was observed in pediatric age group and males. Ampicillin (57.1%), Trimethoprim/sulfamethoxazole (60.1%), and Chloramphenicol (57.1%) showed highest resistance. From 2014 to 2016, the incidence of infection was greatest in children and females. Ciprofloxacin (7.6%), Ampicillin (54.7%), Trimethoprim/sulfamethoxazole (60.1%), and Azithromycin (4.6%) were observed to have increasing pattern of resistance.

Conclusion: Our study showed emergence of multi drug resistant isolates of S. typhi. Therefore, Antibiotic steward ship program, vaccination and local surveillance are highly recommended to control the spread of multi drug resistance among isolates of S. typhi.

Key Words: S.typhi, antibiotic susceptibility, multidrug resistance, emerging trends