

A study of Isolation of Salmonella species from blood culture & it's Antimicrobial Resistant Pattern.

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Abstract

Background: The main aim of this study was to monitor the antimicrobial resistant pattern of Salmonella isolates to select proper antibiotic & prevent drug resistance in Salmonella species.

Material and Methods: Total 250 blood culture bottles were collected from patients clinically suspected enteric fever and loaded to BACTEC 9050. Out of them 200 signalled positive samples were inoculated on chocolate and Mac Conkey agar plates and incubated overnight at 37^o C in the incubator and identified by colony characteristics, procedures like Gram staining, wet preparation for motility and bio-chemical reactions like oxidase test, catalase test, triple sugar iron agar, Citrate test, using Salmonella antisera like Poly O, O-9, and H-d. The clinical isolates were subjected to antibiotic sensitivity test on Mueller-Hinton agar, using modified Kirby Bauer disc diffusion method as per Clinical Laboratory Standard Institute (CLSI) guidelines. **Results:** Total 61 Salmonella were isolated. 49 were Salmonella typhi and 12 were Salmonella paratyphi. Overall rate of resistance of 49 S. typhi isolates was 2 % to ampicillin, 4 % to Azithromycin, 4 % to fluoroquinolones and 2 % to co-trimoxazole. S. paratyphi isolates were 100% sensitive to ampicillin, co-trimoxazole, chloramphenicol and 3rd generation cephalosporins. **Conclusion:** Enteric fever is one such infection which poses challenges in antimicrobial resistance. Continuous surveillance is important to track bacterial resistance and to treat infections in a cost-effective manner.

Keywords: Antimicrobial resistance, Enteric fever, Salmonella