Summary

The genus salmonella is an important human pathogen causing either enteric fever, gastroenteritis, or food poisoning and its diagnosis most often involves direct detection of bacteria in stool by culture or more recently by PCR after enrichment.

The aim of the work is evaluation and comparison between different media used for isolation and differentiation of salmonellae groups including CHROMagar salmonella, Screening of different organisms causing gastroenteritis and assessment of antimicrobial susceptibility of salmonella.

The Current study extended over period of 3 months and involved collection of stool specimens from 250 patients complaining from gastroenteritis either with or without fever. In 16 cases (6 %) Salmonella strains were isolated. Gram negative Isolates other than Salmonella were Shigella 25 (10 %),Proteus 22 (8 . 8 %),Pseudomonus 7(3 %),Klebsiella 10 (4 %) ,Citrobacter 3 (1 . 2 %) and Escherichia coli 167(66 %) .

In this study regarding direct inoculation (without Primary enrichment) CAS media was significantly more sensitive (100 %) than other three media XLD,DCA and SS media (75 % , 69 % and 75 % respectively) in the isolation of salmonella strain .

Sensetivity of CAS before and after primary enrichement was 100 % meaning that no role of primary enrichement with CAS media which reduces time (24 hours) and efforts .

Also in this study,CAS media was showen to be more specific (97 %) than XLD,DCA and SS media (83 % , 86 % and 84 % respectively).

In the present study, high percentage of resistance against many of the first-line drugs against salmonella had been detected. Of the total number of Salmonella strains isolated in this research, 87.5% was resistant to chloramphenicol, 81% to ampicillin ,69% to amoxicillin/clavulanic acid, 38% to first generation cephalosporins. Appreciable figures of resistance percentages were detected against other anti-Salmonella drugs; third generation cephalosporins (12.5%), ofloxacin (12.5%), ciprofloxacin (7%), and imipenem (7%).