INTRODUCTION

INTRODUCTION

- Salmonella typhi is one of the members of family Enterobactericae, genus Salmonella subspecies I enterobacteria (i.e. non lactose fermenting, facultatively anaerobic, oxidase - negative, Gram - negative rods) that generally are motile by peritrichous flagella, but Gallinarum - Pullorum is non - motile. Salmonella typhi is also urease negative, citrate - utilizing, acetyl methyl - carbinol - negative and KCN - negative (Alex C et al., 1980).
- Typhoid fever is an enteric infection caused by Salmonella typhi, where, systemic symptoms often predominate so that, it is defined as an acute septicemic illness in a patient with compatible signs and symptoms accompanied by bacteriological recovery of Salmonella typhi from at least one site (Gilman et al., 1975).

Although typhoid fever is steadily diminishing in importance in western world it remains a major cause of illness in developing countries.

As these organisms lack animal reservoir, so the epidemiology of typhoid fever primarily involves person to person spread.

Contamination with human feaces is the major mode of spread, and the usual vehicle is contaminated water or food. The most frequent animal source of infection is poultry and eggs, but beef and pork products that are inadequately cooked have heen implicated as well. Dogs and other pets including turtels are additional sources (Gilman et al., 1975).

- Powerful epidemiological tools for studying outbreaks of typhoid fever and spread of the organism are plasmid fingerprinting and bacteriophage typing (Ralph and Gianella., 1989).
- Plasmid fingerprinting has been used for the identification of bacterial strains involved in epidemics and surveillance of nosocomial and community - acquired infections (Tenover; 1985, Brown et al; 1986, Platt et al.; 1986. 1988, and others).
- A survey of the presence of IS200 among enteric bacteria revealed that more than 90% of the pathogenic or food-poisoning isolates of Salmonella spp. examined contained one or more copies of insertion sequence IS200, with the exception of the subgenus 1 servovar S. agona in which IS200 is not found. Although insertion sequence IS200 was first considered a Salmonella - specific element, it also exists in many isloates of Shigella sonnei and Shigella flexneri, but not in Shigella dysenteriae. The distribution of insertion sequence IS200 in Salmonella and Shigella was studied by Gibert et al (1990).
- The epidemiological applicability of the insertion sequence IS200 fingerprinting of Salmonella typhi was assessed by Threlfall (1994).
- A copy of the IS200 insertion element was found between the gyr A and rcs C genes of Salmonella typhi (Calva et al., 1997).
- PCR assays were designed for molecular typing of Salmonella typhi, and these were potentially useful in studying the epidemiology of typhoid fever.