

**SALMONELLA GASTROENTERITIS: EPIDEMIOLOGY,
CLINICAL MANIFESTATIONS AND TREATMENT OUTCOME**



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ABSTRACT

Background: *Salmonella* species that contribute to gastroenteritis are a significant food-borne pathogen affecting the general population and have made an alarming contribution to the emergence of drug resistant strains.

Objectives: The aim of this study is to identify the prevalence of *Salmonella* gastroenteritis and antibiotic-resistant *Salmonella* in admitted patients of Samutsakhon Hospital.

Methods: A descriptive cross-sectional retrospective study was conducted which included patients of all ages admitted to Samutsakhon Hospital with acute gastroenteritis and sent for stool culture from year 2013 to 2015. Clinical manifestations, treatment outcomes and antimicrobial susceptibility patterns were obtained from patients with *Salmonella* gastroenteritis and analyzed.

Results: The prevalence of *Salmonella* gastroenteritis was 529/7,575 episodes of acute diarrhea (6.9%). Among 529 episodes, 351 cases of *Salmonella* gastroenteritis were investigated for epidemiology, clinical manifestations, treatment and treatment outcome. More than half of these 351 patients (56.1%) were children aged less than 5 years. *Salmonella* serogroup B was the most predominant serogroup found, infecting 48.4% of children and 31.9% of adult patients. The prevalence of antibiotic resistant *Salmonella* in patients suffering gastroenteritis was 71.5%. Most of the *Salmonella* strains from child-aged patients were resistant to ampicillin (62.6%) and ciprofloxacin (42.2%). In adults, resistance to ciprofloxacin was 46.3% and ampicillin was 45.6%. Of the 351 cases, only 123 (35.0%) were treated with appropriate antibiotic. The mortality rate resulting from *Salmonella* gastroenteritis was 1.7%. Of the 6 mortalities, only 2 of these patients were treated with the appropriate antibiotic. Eleven patients had multiple admissions of *Salmonella* gastroenteritis within 3 years (24 episodes). Nearly half of these (45.5%) were treated inappropriately at the first time of infection.

Conclusion: Children aged less than 5 years were the most common age group found suffering from *Salmonella* gastroenteritis. Antibiotic resistance of *Salmonella* gastroenteritis was very high despite of its low prevalence. Use of inappropriate antibiotics may be contributing to death and repeated infection.

KEY WORDS: *SALMONELLA* GASTROENTERITIS / PREVALENCE / ANTIBIOTIC-RESISTANCE / SEROGROUPS