

## CASE REPORT AND PATHOLOGICAL RESULT BASED STUDY ON TYPHOID PATIENTS.

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### ABSTRACT:

The present study was designed to analyze the antibiotic sensitivity pattern and symptomatic feature in typhoid patients. The study was conducted over a period of 1 year. Total of 46 culture positive cases of Typhoid fever were studied from the obtained case report data. Out of 46 cases, 33 (71.7%) were males and 13 (28.3%) were females. Fever was present in all patients. Resistance of *S. typhi* to amoxicillin, chloramphenicol and cotrimoxazole were significantly high. Ciprofloxacin showed resistance in 2 (4.3%) cases. Sensitivity to ceftriaxone was 100% in our study. Typhoid fever is one of the most common health problems in Banaskantha, Gujarat. Various drugs are being used in the treatment of typhoid fever, in the mean time resistance to many of them are emerging.

**Keywords:** Typhoid fever, *S. typhi*, Drug resistance.

### INTRODUCTION:

Typhoid fever occurs in all parts of the world where there is substandard water supply and sanitation. WHO estimates the annual global incidence of typhoid fever at 0.3%.<sup>1</sup> The annual incidence is markedly higher in some developing countries of Asia and Africa. An estimated 6,00,000 deaths from enteric fever occurs annually worldwide.<sup>1</sup> In India it is endemic with morbidity ranging from 102 to 2219 per 100,000 population.<sup>2</sup>

Chloramphenicol was considered the gold standard antimicrobial for the treatment of typhoid fever after its introduction in 1948.<sup>3</sup> However in the last two decades there has been an increase in the resistance of *S. typhi* to chloramphenicol. It was first reported in Britain in 1950.<sup>4</sup> Due to increasing frequency of antibiotic resistance, the use of chloramphenicol, amoxicillin and co-trimoxazole have become infrequent and quinolones have become the first line of treatment of typhoid fever. Ceftriaxone is the drug of choice in the quinolone resistant cases in our clinical practice. Resistance to multiple drugs has become matter of great health concern in the management of typhoid fever.

### MATERIALS AND METHODS:

The study was carried out in Banaskantha District, Gujarat over the period of 1 year (Between 1<sup>st</sup> July 2008 to 30<sup>th</sup> June 2009). In this study case report file from various hospital of Banaskantha district of typhoid patient was studied out. The patient were distributed according to their clinical features of high grade fever, headache, relative bradycardia, coated tongue, diarrhoea, constipation, vomiting and splenomegaly were investigated. Pathological report of the blood cultures were obtained from hospital's Laboratories where, the blood cultures were incubated at 37°C for at least 72 hrs and only culture positive cases (n=46) were included in the study. Male to Female Ratio, sign and symptomatic distribution of patient, Leukocyte count, Antibiotic Sensitivity Pattern were calculated.

### RESULTS:

A total of 46 cases report study of culture positive typhoid fever were studied. Out of these, 33 (71.7%) were males and 13(28.3%) were females in [Table 1].

**Table 1:** Male/Female ratio (n=46):

Male	33	71.7%
female	13	28.3%

Fever was present in all the patients (100%). Headache was present in 82.6% patients and other predominant symptoms were abdominal pain (26.1%), diarrhoea (28.3%), vomiting (21.7%) and constipation (13%). Splenomegaly was present in 28.3% patients [Table 2].

**Table 2:** Distribution of Symptoms and Signs in the case report population (n=46):

Sign & Symptoms	Number of patients	Percentage (%)
Fever	46	100
Headache	38	82.6
Diarrhoea	13	28.3
Abdominal pain	12	26.1
Vomiting	10	21.7
Constipation	06	13
Coated tongue	27	58.7
Relative bradycardia	20	43.5
Splenomegaly	13	28.3

89.1% of the patients had total leukocyte count in the normal range i.e. 4000-11000/ cu mm [Table 3].

**Table 3:** Leukocyte count in the study population (n=46):

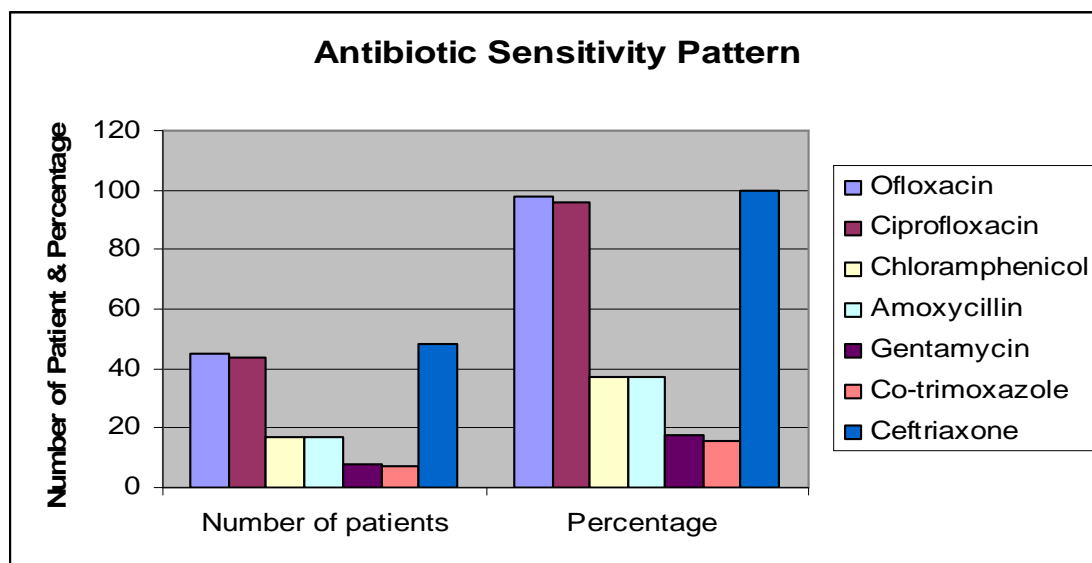
Count	Number of patients	Percentage
Normal (4000-1000/cumm)	41	89.1
Leucocytosis (>11000)	4	8.7
Leucopenia (<4000)	1	2.2

[Table 4, Figure 1] shows that the resistance of *S. typhi* to amoxicillin, chloramphenicol and co-trimoxazole was significantly high. Ciprofloxacin showed resistance in 2 (4.3%) cases and ofloxacin showed resistance in 1(2.2%) case. Sensitivity to ceftriaxone was 100% in our study.

Antibiotics	Sensitive number	Percentage (%)
Ofloxacin	45	97.7
Ciprofloxacin	44	95.7
Chloramphenicol	17	37
Amoxycillin	17	37
Gentamycin	8	17.4
Co-trimoxazole	7	15.2
Ceftriaxone	46	100

**Table 4:** Antibiotic Sensitivity Pattern:

**Figure 1:** Antibiotic Sensitivity Pattern



**DISCUSSION AND CONCLUSION:**

Typhoid fever is the systemic infection primarily involving the alimentary tract by the gram negative enterobacteriaceae, the salmonella typhi<sup>5</sup>. Mode of transmission is through faeco-oral route, ingestion of contaminated food and drink is the common mode of infection. The disease is common in community with low standard of public health. In developing countries millions develop the disease and the mortality is as high as 30%.

Typhoid is one of the major public health problems in banaskantha district and in India or other developing countries. Various drugs are being used for the treatment of typhoid, at the same time resistance to many of the classical drugs are emerging. Indiscriminate use of drugs for the treatment of suspected cases of typhoid fever should be discouraged.

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