

## Case Report

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# Case report on typhoid fever

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### Abstract

An Eight-year-old boy with high grade fever, abdominal pain and vomiting suspected for typhoid and diagnose by serological test (rapid card test), urine analysis and blood culture were also performed. Rapid card test is very helpful for the detection of IgG and IgM antibodies present in the body in 15-30 minutes of time. With rapid card test and blood culture the patient was diagnosed with typhoid fever. The Ceftriaxone antibiotic was given to patient intravenously for 5 days and the patient recovered.

**Keywords:** enteric fever; typhoid fever; blood culture; serology for typhoid.

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### Introduction

Enteric fever is also known as Typhoid fever, it is deadly disease in developing countries particularly in India. Enteric fever is a systemic infection caused by the human adapted pathogen salmonella enterica serovar Typhi or Salmonellae typhi. A similar but often less severe disease is caused by Salmonella para typhi A & B and sometimes Salmonella para typhi C [1]. The organism is transmitted by the faecal-oral route, contaminated food and water. The signs and symptoms of typhoid fever are nonspecific [2]. The global annual incidence of enteric fever was estimated between 11.9 million to 26.9 million cases, in the year 2010 [3,4]. Enteric fever carries a mortality rate of 30%, if not treated properly, whilst appropriate antibiotic therapy reduces the mortality rate to as low as 0.5% [5]. If the treatment timely done with appropriate antimicrobial agents is important for reducing the mobility and morbidity. The third generation Cephalosporin like ceftriaxone and Ciprofloxacin are the drug of choice for treating multi drug strains of salmonella typhi. Ciprofloxacin, Ofloxacin, perfloracin and Fleroxacin are common Fluroquinolones proved to be effective and used in adults. In children the Ciprofloxacin and Ofloxacin these two are only used in our country.

### Case report

An Eight year old boy admitted to Subharti Hospital, Dehradun, India, with a four days history of fever, headache, vomiting and abdominal pain. Patient experience weakness, with body pain and temperature was 100°F. The blood sample and urine sample was taken and transfer for serology examination, urine examination and blood culture.

**Clinical findings:** fever, vomiting, abdominal pain, diarrhea or headache.

**Identification of the patient:** A 08 year's old Premnagar boy was brought to the General medicine ward on March 3, 2020 with high grade fever and abdominal pain.

**Family background:** The family consists of five individuals. My patient was diagnosed with Typhoid. Except my patient, who was admitted to the hospital, none of the family members had typhoid and any health problems.

**Diagnostic evaluation:** TYPHIDOT positive for IgM Urine analysis report shows pus cell 3-4; 1-2 RBCs; 1-2 epithelial cells; bacterial cells absent and Blood culture negative. Total

RBC count -4.68 millions/cum, TLC -10,500/cum, Hb-10.60 gm/dl, DLC (Neutrophils- 75.4%, Lymphocytes- 14.5%, Eosinophils- 4.6%, monocytes-5.1%, Basophils- 0.2%), Platelets-145,000/cum, MPV- 10 fL, PDW- 17.00%.

The urine analysis report shows pus cell 3-4; 1-2 RBCs; 1-2 epithelial cells; bacterial cells absent and negative for bile pigment. The results of blood culture were negative with no history of antibiotic therapy in the previous seven days.

The ceftriaxone antibiotic given to patient intravenously at 750 mg per day along with Pantoprazole and Ranitidine divided in two doses and oral calpol (paracetamol and diphenhydramine hydrochloride) syrup once every five hours until the auxiliary temperature below 100°F for at least 24 hours. All data were recorded in patient special forms. The patient is observed and examined twice daily clinical signs and symptoms recorded in the patient form.

After two to three days of continue treatment the signs and symptoms such as headache, fever, vomiting and abdominal pain is disappeared. No side effects were observed biochemically and clinically from the treatment done with the antibiotic ceftriaxone. An infection is considered clinically cured if the all signs and symptoms are resolved and the patient feels well during follow-up. The few days' medicine prescribed i.e. Cefixime at 100 mg with pantacid 20 mg and becosule 5 ml per day for one week to avoid relapse.

**Etiology:** Typhoid fever is a bacterial disease, caused by *Salmonella typhi*. It is transmitted by the ingestion of contaminated food and water. The transmission of the infection is through contaminated food and water.

Signs and symptoms of Typhoid infection:

- Headache.
- High grade fever.
- Abdominal pain.
- Vomiting.
- Constipation.
- Rose spots may appear.
- Diarrhea.

**Outcome:** After two to three days treatment, the patient's condition improves. Fever, headache, vomiting and abdominal pain all went away.

**Conclusion:** Patient was admitted to Subharti hospital with vomiting, headaches and abdominal pain as well as fever. After receiving proper treatment, his condition improved.

### Discussion

Typhoid fever remains a serious public problem in the developing countries, with mortality range between 5% and 20% [7]. The World Health Organization reported the prevalence of typhoid fever as 28.1 per 1000 febrile episodes in India [7]. Blood culture positivity is typically high during the 1st week of illness but it can also be isolated from subsequent weeks also if there's no prior antibiotic therapy [7,8]. The public health burden of typhoid fever can be significantly decrease by rapid diagnosis and appropriate antibiotic therapy. The present study tells that Azithromycin, Ceftriaxone and Ceftazidim are the most effective

drug which is used against *Salmonella typhi*.

Typhoid fever is very common infection now a day. The common early presentation of typhoid fever is insidious onset of continuous high grade fever, with nonspecific malaise, headache, constipation, vomiting and abdominal pain. The first week of infection the signs are usually not present [9,10,11]. Though definitive diagnosis of enteric fever is isolation of the causative organism from the patient, Rapid Typhidot card test are very important diagnostic device in the medical laboratories.

Serological analysis was done with TYPHIDOT card test which shows immunoglobulin IgM antibody positive result which indicates the early primary infection. The urine analysis report shows pus cell 3-4; 1-2 RBCs; 1-2 epithelial cells; negative for bile pigment and bacterial cells absent. The results of blood culture were negative with no history of antibiotic therapy in the previous five to seven days. The ceftriaxone antibiotic given to patient intravenously at 750 mg per day along with Pantoprazole and Ranitidine divided in two doses and oral calpol (paracetamol and diphenhydramine hydrochloride) syrup once every five hours until the auxiliary temperature below 100°F for at least 24 hours. The few days' medicine prescribed i.e. Cefixime at 100 mg with pantacid 20 mg and becosule 5 ml per day for one week to avoid relapse.

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