



Management of patient with Typhoid fever “ A case report”

Ms. Vaishali Tembhare

Teaching Faculty, Smt. Radhikabai Meghe memorial collage of nursing Datta Meghe Institute of Medical Sciences,
(Deemed to be University) Sawangi (M) Wardha ,Maharashtra. India

Abstract:

Typhoid fever is major health problem worldwide. In typhoid fever there are sign symptoms such as Fever, malaise, abdominal discomfort, and other nonspecific symptoms are common, and they are often confused with other causes of febrile syndrome. Patient is having sign symptoms as gastrointestinal symptoms, malaise, hepatomegaly, and high liver enzymes presented with a two-week fever. As a differential diagnosis, a Widal test is done and two blood cultures were requested; both came out positive, confirming the diagnosis of typhoid fever caused by Salmonella typhi. Treatment with ceftriaxone and metronidazole was started prior to confirmation of the diagnosis, with a partial response; later, pharmacological therapy was altered based on ciprofloxacin susceptibility testing, with a satisfactory clinical response.

We look at how to diagnose and treat enteric fever, with an importance to typhoid fever.

MAIN SYMPTOMS OR IMPORTANT CLINICAL FINDING:-

A 6 year old male was admitted in A.V.B.R.H on date 12/03/2021 with chief complaint of abdominal discomfort, malaise, problems such as fever since 2 weeks, gastrointestinal symptoms, lethargy, hepatomegaly, and an increased liver enzyme.

THE MAIN DIAGNOSIS, THERAPEUTIC INTERVENTION, AND OUTCOME

A case is diagnosed as Typhoid Fever. After physical examination and investigation, doctor was detected a case of 6 week.

Therapeutic intervention and outcome:-

Also provide a calcium supplements and iron supplements present case was stable but according to ultrasonography finding. Typhoid fever with patients was treated antipyretic, to reduce fever also to maintain body temperature and provide iron supplementary, protein powder.

Outcome-

Good sanitation, improved water supply, and a suitable sewage waste matter system, as well as the successful use of existing typhoid vaccinations, can all help to avoid typhoid fever.

NURSING PERSPECTIVE:-

Administration fluid replacement.i.e DNS and RL monitored vital signs per hourly. Maintained temperature chart 2 hourly strictly, maintained intake output chart properly. Tab. paracetamol, antibiotics given as per doctor's order.

Conclusion:-

Good sanitation, improved water supply, and a suitable sewage waste matter system, as well as the successful use of existing typhoid vaccinations, can all help to avoid typhoid fever.

KEYWORDS:

Enteric fever, typhoid fever.

INTRODUCTION :-

Enteric fever is another name for typhoid fever. It is a multisystem sickness that has been a public health issue, particularly in poor countries. *Salmonella Typhi* and *Salmonella paratyphi* are the bacteria that cause it. ¹Typhoid fever and paratyphoid fever are also known as enteric fever. Because paratyphoid and typhoid fever are clinically indistinguishable, the terms enteric and typhoid fever often interchanged. ²Typhoid fever is one of the causes of death and morbidity in overcrowded and unsanitary places, despite the fact that extensive research and public health efforts have reduced the incidence. The disease can manifest itself in a variety of ways, from early gastrointestinal pain to nonspecific systemic sickness, but it can also result in a variety of problems. The 'four Fs' are supposed to transmit salmonella (flies, fingers, feces, fomites). Fever usually begins in a step-wise rhythm (i.e., rises and falls alternately), with headache and stomach discomfort following. Typhoid fever, also called typhoid, is a bacterial infection caused by *Salmonella* serotype Typhi. Symptoms can range from moderate to severe and appear anywhere between 6 and 30 days following exposure. A high temperature usually develops gradually over a few days. Weakness, stomach discomfort, constipation, headaches, and moderate vomiting are frequent symptoms.⁴In extreme situations, patients may develop disorientation. Typhoid fever is a globally spread infectious illness. Although much is known about *Salmonella typhimurium* infection in mice and the interaction of this serovar with human cell lines in vitro, there is little known about *S. typhi* and the pathogenesis of typhoid fever. This review focuses on three aspects: gut epithelial cell adhesion and penetration, systemic dispersion, and host cell survival and reproduction. We also want to put current salmonella research into context with typhoid sickness.⁵ Among children and adolescents in south-central and Southeast Asia, Typhoid and paratyphoid fevers are common causes of sickness and mortality. Enteric fever is related with inadequate hygiene and contaminated food and water. High-quality incidence data from Asia is bolstering efforts to enhance typhoid vaccine access.⁶ The bacteria *Salmonella enterica* serovar Typhi causes typhoid fever, which is an acute systemic illness. Typhoid fever is caused by *Salmonella enterica* serovars A, B, and C, which are clinically identical.⁷ Enteric fevers are a combination of typhoid and paratyphoid fevers. Typhoid fever is responsible for nearly 90% of enteric fever in most endemic countries. Typhoid is spread through the fecal-oral route, which involves contaminated food and

water, and is hence widespread in areas with poor sanitation and limited access to safe drinking water. Throughout the nineteenth century in the United States and Europe typhoid fever was once common, but now it is seen in developing countries. Antibiotic resistance has risen dramatically in the last fifteen years, resulting in large outbreaks and complicating the management of this fatal disease. Until the 19th century, typhoid fever was frequently mistaken with other long-term febrile infections, particularly typhus fever.⁸ Enteric fever is a global public health problem that is most frequent in countries where poor sanitation makes it easier for food and water to become contaminated with human waste. In India and various South Asian, Middle Eastern, Central African, and South American countries, typhoid fever epidemics and high endemic sickness rates have been reported. Typhoid fever is responsible for an estimated 21 million illnesses and 200,000 fatalities worldwide each year.⁹ The most common causes of illness are person-to-person transmission through poor hygiene and sewage pollution of the water supply.¹⁰

Patients information:

Patientspecificinformation:-

6 year old male was admitted in A.V.B.R.H on 12/03/2021 with Chief complaints of abdominal discomfort, malaise, mainly present with fever of two weeks associated with gastrointestinal symptoms, malaise, hepatomegaly and elevated liver enzyme.

Primary concerns and symptoms of the patient: Present case visited AVBR hospital at Pediatric OPD on date 12/03/2021 with chief complaint of abdominal discomfort, malaise, liver enzymes.

Medical, family, and psycho-social history: Present case had history of typhoid fever. He belonged to nuclear family. She was mentally stable, conscious and oriented to date, time and place. He had maintained good relationship with doctors and nurses as well as other patients also.

Relevant past intervention with outcomes: Present case had no any history of disease, no history of attack,

Clinical findings:

A 6 year old male was admitted in A.V.B.R.H on date 12/03/2021 with chief complaint of abdominal discomfort, malaise, mainly present with fever of two weeks associated with gastrointestinal symptoms, malaise, hepatomegaly and elevated liver enzyme.

Blood investigations CBC:- 11.5(g/dl) WBC- 1,000 Widal test-positive

Ultrasonography –Hepatomegaly, splenomegaly.

Timeline: He taken the treatment in A.V.B.R. Hospital .

Diagnostic assessment: On the basis of patient history, physical examination,

Physical examination:-

Temp:- 98.6 F, Pulse:- 80 b/m, Respiration :- 22 b/m, Blood Pressure:- 130/90 mm/hg

Patient is conscious, No edema.

Therapeutic intervention:

Present case took the medical management with typhoid fever, antipyretics given such

Tab. Paracetamol 500mg bd ,Several different types of antibiotics are used to treat typhoid fever Inj. Ceftriaxone 2gm IV bd, Inj. Levofloxacin 750 mg. IV od

Nursing perspectives: Administration fluid replacement.i.e DNS and RL monitored vital signs per hourly. Maintained temperature chart 2 hourly strictly, maintained intake output chart properly. Tab. paracetamol, antibiotics given as per doctor's order.ORS therapy also given as per doctor's order.

Discussion:

This patient had sign symptoms such as abdominal discomfort, malaise, mainly present with fever of 2 weeks associated with gastrointestinal symptoms, malaise, hepatomegaly and elevated liver enzyme.

My patient feel better now, and all symptoms treated with medication and nursing care ,he taken follow up and routine checkup.

According to study Typhoid fever in children aged less than 5 years done by Anju Sinha MD^a, Sunil SazawalMD^{ad}, Ramesh Kumar MD^a, Seema SoodMD^b, Vankadara P ReddaiahMD^c , BirSinghMD^c, MallaRaoMPH^e, AbdollaNaficyMPH^e, John D Clemens MD^e, Prof Maharaj K BhanMD^a

Our findings call into question the widely held belief that typhoid fever is a disease that only affects school-aged children and adults. Typhoid fever is a prevalent and serious cause of illness in children aged 1 to 5. The best age for typhoid Immunisation and the vaccines to use should be reconsidered. ¹¹

According to study typhoid fever in children aged less than 5 year Done by H.sprinz, EJ. Gangarosa, MWilliams , RB hornick.

Our finding challenge the common view that typhoid fever and 6 year of age.¹²

Typhoid fever in children, according to a study Our findings imply that typhoid fever is common in this community, with the highest rates occurring in children aged 5–10 years (both girls and boys), especially during wet months. A considerable number of possible instances were overlooked by facility-based surveillance, necessitating the development of even more extensive surveillance systems. There is also a need for additional research into the public's healthcare-seeking behavior and the practices of healthcare providers so that more precise studies can be created to capture genuine incidence. This will eventually be required in order to make a judgment on whether or not to deploy mass typhoid immunization in high-risk age groups.¹³ Athree-dose Ty21a vaccination regimen probably protects about half of typhoid cases within the first three years after immunization (moderate confidence evidence). The patients in this study range in age from 3 to 44 years old. Although fever is expected to be more widespread after immunisation, this vaccine is unlikely to cause more vomiting, diarrhoea, nausea, or stomach discomfort than placebo (moderate-certainty evidence), headache, or rash (moderate-certainty evidence).¹⁴

According to the Study of clinical profile and antibiotic response in typhoid fever

Author links open overlay panelmchowta¹nkchowta¹

Department of Pharmacology (MNC) and Medicine (NKC), Kasturba Medical College, Mangalore - 575 002, Karnataka, India

The purpose of this study is to determine the clinical profile and pattern of various medicines used to treat typhoid fever. During the years 1999-2001, a retrospective analysis of adult typhoid fever cases was conducted at Kasturba Medical College Hospital in Attavar. Diagnosis of patients was based on clinical features, widal test and blood culture. The sensitivity pattern of blood culture isolates was documented. The manner in which the patient presented, the clinical course, treatment history, laboratory investigation results, antibiotics utilized, therapeutic response, and complications were all recorded. There were 44 cases of typhoid fever studied in total. Males made up 21 percent of the total (47.7%), while females made up 23 percent (52.3 percent). The presenters were on average 23.9 years old. The average number of days spent in the hospital was 10.8. A fever was seen in all of the individuals. Resistance to amoxicillin, chloramphenicol, ampicillin, and co-trimoxazole was extremely high in *S. typhi*. In addition, 18.1 percent of patients tested positive for ciprofloxacin resistance. Cephalosporin sensitivity was 100 percent in our study. Ciprofloxacin was shown to be the most commonly used antibiotic in our study (23 patients). Chloramphenicol was given to two patients alone, whereas it was given to three others after six days of ciprofloxacin medication. In 16 patients, third-generation cephalosporins (ceftriaxone) were used alone. Drugs should not be used indiscriminately in the treatment of typhoid fever. To prevent the formation of resistant strains of *S. typhi*, the appropriate antibiotic should be used as suggested by sensitivity tests.¹⁵

References:

1. https://en.m.wikipedia.org/wiki/Typhoid_fever.

Buckle GC, Walker CLF, Black RE. Typhoid fever and paratyphoid fever: systematic review to estimate global morbidity and mortality for 2010. *J Glob Health*. 2012;2:10401. [PMC free article] [PubMed] [Google Scholar]

2. Bhan M, Bahl R, Bhatnagar S. Typhoid and paratyphoid fever. *Lancet*. 2005;366:749–762. [PubMed] [Google Scholar]

3. Parry CM, Thompson C, Vinh H, Chinh NT, Phuong le T, Ho VA, Hien TT, Wain J, Farrar JJ. Risk factors for the development of severe typhoid fever in Vietnam. *BMC Infect Dis*. 2014;14:73. [PMC free article] [PubMed] [Google Scholar]

4. Khan M, Coovadia YM, Connolly C, Sturm AW. Influence of sex on clinical features, laboratory findings, and complications of typhoid fever. *Am J Trop Med Hyg*. 1999;61:41–46. [PubMed] [Google Scholar]

5. s. 2001 Oct 1;14(5):573-8. House D, Bishop A, Parry C, Dougan G, Wain J. Typhoid fever: pathogenesis and disease. *Current opinion in infectious disease*

6. Verma R, Bairwa M, Chawla S, Prinja S, Rajput M. New generation typhoid vaccines: an effective preventive strategy to control typhoid fever in developing countries. *Human Vaccines*. 2011 Aug 1;7(8):883-5.

7. Parry CM. Epidemiological and clinical aspects of human typhoid fever. *Salmonella infections: Clinical, immunological and molecular aspects*. 2006:1-8.

8. Parry CM. Epidemiological and clinical aspects of human typhoid fever. *Salmonella infections: Clinical, immunological and molecular aspects*. 2006:1-8.
9. Vollaard AM, Ali S, Widjaja S, van Asten HA, Visser LG, Surjadi C, van Dissel JT. Identification of typhoid fever and paratyphoid fever cases at presentation in outpatient clinics in Jakarta, Indonesia. *Transactions of the Royal Society of Tropical Medicine and Hygiene*. 2005 Jun 1;99(6):440-50.
10. Christopher m. parry et al the BMJ 2009.
11. Mweu E, English M. Typhoid fever in children in Africa. *Tropical Medicine & International Health*. 2008 Apr;13(4):532-40.
12. Singh ZN, Rakheja D, Yadav TP, Shome DK. Infection-associated haemophagocytosis: the tropical spectrum. *Clin Lab Haematol*. 2005;27:312–315. [PubMed] [Google Scholar].
13. Siddiqui FJ, Rabbani F, Hasan R, Nizami SQ, Bhutta ZA. Typhoid fever in children: some epidemiological considerations from Karachi, Pakistan. *International Journal of Infectious Diseases*. 2006 May 1;10(3):215-22.
14. Bhan MK, Bhatnagar S. Typhoid and paratyphoid fever. *The Lancet*. 2005 Aug 27;366(9487):749-62.
15. Chowta MN, Chowta NK. Study of clinical profile and antibiotic response in typhoid fever. *Indian Journal of Medical Microbiology*. 2005 Apr 1;23(2):125-7.