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# Rare presentation of typhoid fever in an immunocompetent patient

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## Abstract

Typhoid fever, caused by *Salmonella enterica* serovar Typhi, is the most common cause of enteric fever, and presents classically with fever and other gastrointestinal symptoms. We report an interesting case of a 27-year-old Indian man who lives in a semiurban area of Haryana (northern India) and presented with a 3-day-long history of intermittent fever, chills, and rigor. He was misdiagnosed previously as having mumps fever in view of the clinical presentation, but later, with proper workup, it was found to be an atypical presentation of typhoid fever. He responded well to intravenous antibiotics and recovered completely from typhoid infection.

**Keywords:** A typical presentation, epididymo-orchitis, mumps infection, parotitis, *Salmonella paratyphi*, *Salmonella typhi*, typhoid fever

## INTRODUCTION

Typhoid fever is a common public health problem, especially among individuals of lower socioeconomic status. It is caused by *Salmonella typhi* and *Salmonella paratyphi*. The most common method of spread is by ingestion of contaminated food and water [1,2]. The ailment is quite common in developing countries such as south-east Asia, China, Africa, and south and central America [3]. Its occurrence is rare in developed countries because of improvements in safe water supply and proper disposal of excreta. Typhoid fever is an acute systemic ailment caused by the bacterial invasion of Peyer's patches in the ileum, leading to bacteremia and multiplication of bacteria in the phagocytic cells of the liver, spleen, and lymph nodes. Various organs may be involved in the course of typhoid fever, resulting in a wide spectrum of presentations from simple fever to the involvement of multiple organs, leading to multiorgan failure.

Most commonly, patients present with fever, toxemia, and gastrointestinal disturbances in the first week and complications in the form of intestinal hemorrhage and intestinal perforation in the third week. Unusual presentations of typhoid fever include jaundice, abdominal lymphadenopathy, acalculous cholecystitis, splenic and liver abscess, myocarditis, pneumonitis, and rarely meningitis, pancarditis/myocarditis,

orchitis, osteomyelitis, and parotitis [4]. We report an interesting case of typhoid fever in a 27-year-old man who was misdiagnosed as having mumps infection in an adult.

## CASE REPORT

A 27-year-old computer professional presented to our outpatient department with the complaint of fever with throat pain for 3 days. His fever was intermittent and associated with body ache. A clinical diagnosis of viral fever was made and the patient was put on paracetamol 650 mg four times daily. After 2 days, the patient again presented to the outpatient department with increased febrile episodes and swelling on the bilateral (b/l) side of neck involving the parotid area on the left side more than the right side. This patient had neither been vaccinated nor had mumps in the past according to his mother. His routine investigations for fever (complete blood count, peripheral smear for malarial parasite, typhidot, urine routine) were found to be normal. Hence, in view of the clinical presentation, a provisional diagnosis of mumps viral infection was made and his blood samples for mumps IgM antibodies were sent to laboratory. He again presented to us after 3 days,

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this time in emergency, with severe left-sided scrotal and lower abdomen pain with increased b/l parotid swelling and high-grade fever. The patient was admitted this time in view of no clinical improvement and re-evaluation of the diagnosis was performed. The patient was put on broad spectrum antibiotic therapy (injection ceftriaxone 2 g intravenous b.d.) and antipyretic (injection paracetamol 1 g intravenous, t.d.s.) coverage done rest symptomatic medication continued. All routine investigations were repeated; his blood report for IgM Typhi Dot IgM Ab (enzyme-linked immunosorbent assay) came back positive. For confirmation, blood culture was sent. His ultrasound of the whole abdomen and chest radiography were found to be normal. Doppler of b/l testicular vessels showed mildly sluggish flow. Meanwhile, his mumps test came back negative. Hence, after ruling out other similar viral infections,

epstein barr virus, etc., a final diagnosis of complicated typhoid was made and injection ceftriaxone was continued for 5 days. Later, his blood culture report came back positive for *S. typhi* sensitive to ceftriaxone antibiotic. Being an atypical presentation, an immunocompromised status was ruled out. He showed significant improvement under treatment and was discharged on the sixth day with oral therapy of tablet cefixime 400 mg b.d. for the next 5 days. All routine investigations were found to be normal before discharge (Table 1, Fig. 1).

## DISCUSSION

The typical presentation of typhoid fever has changed over the years. Atypical presentations can delay the clinical suspicion, diagnosis, and treatment [5]. Our patient had an atypical

**Table 1: Routine investigation**

Blood and urine parameters	Before starting ceftriaxone therapy (day 5 of onset of symptoms)	Before starting ceftriaxone therapy (day 8 of onset of symptoms)	After completion of ceftriaxone therapy (day 13 of onset of symptoms)
CBC			
Hb.	13.2	14.5	13.9
Hct.	34.6	39.4	35.7
TLC	5700	3000	4200
DLC	N69/L24/M2/E5	N82/L18/M1/E1	N72/L27/M1/E0
P/C	289 000	379 000	252 000
LFT			
Bilirubin levels	0.8(D), 0.6(I)	1.2(D), 1.6(I)	1.0(D), 0.9(I)
Enzymes	PT (67).OT (43)	PT (250).OT (273)	PT (90).OT (80)
KFT			
Blood urea	19	46	22
Creatinine	0.8	1.4	1
Serum sodium	139	146	132
Serum potassium	4.1	5	3.9
Fever panel			
Typhidot IgM	Negative	Positive	Not done
P/S for MP	Negative	Negative	Not done
Urine R/M	Normal	Normal	Normal
Urine culture	Not done	Negative	Not done
Blood culture	Not done	Positive for <i>Salmonella typhi</i>	Not done
Mumps antibodies			
IgM	Not done	Negative	Not done
IgG		Negative	
EBV antibodies			
VCA IgM	Not done	Negative	Not done
VCA IgG		Negative	
Adenovirus antigen			
PCR	Not done	Negative	Not done
Para influenza			
PCR	Not done	Negative	Not done
Miscellaneous test			
Chest radiography	Not done	Normal	Not done
USG whole abdomen	Not done	Normal	Not done
b/l testicular artery Doppler	Not done	Mildly sluggish flow of blood	Not done

b/l, bilateral; CBC, complete blood count; Hb, hemoglobin; Hct, hematocrit; KFT, kidney function test; LFT, liver function test; MP, malarial parasite; TLC, total leukocyte; USG, ultrasonography, VCA, viral capsid antigen; DLC, differential leukocyte count, EBV, epstein barr virus



**Figure 1:** Epididymo-orchitis secondary to typhoid fever.

wide spectrum presentation in the form of fever, b/l parotid enlargement, and left-sided epididymo-orchitis. Because of the clinical presentation, an earlier diagnosis of mumps was made, but on repeated evaluation, it was found to be an atypical presentation of typhoid fever. The patient responded well to conventional typhoid fever therapy.

Liver involvement is quite common in typhoid fever, which generally remains for the short term and is self-limiting after recovery from typhoid infection [6]. The incidence of intestinal hemorrhage, intestinal perforation, and overall mortality is higher in jaundiced typhoid patients [7]. The prevalence of atypical presentation is high in multidrug-resistant typhoid fever [8].

Parotid involvement in typhoid fever is generally found in HIV patients [9,10] but in an immunocompetent individual, this is a rare finding. Typhoid fever is also associated with abnormal liver function tests, but b/l parotid enlargement with epididymo-orchitis is rare.

## CONCLUSION

Clinical presentations of typhoid fever vary from case to case. Fever with parotid enlargement and epididymo-orchitis is

generally encountered in mumps infection, but uncommonly, it is also encountered in typhoid fever, especially in immunocompromised individuals. We presented a rare case where the patient was neither immunocompromised nor infected with the mumps virus. Here we report a rare presentation of typhoid infection that can present with fever, parotid enlargement, and epididymo-orchitis.

## Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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## Conflicts of interest

There are no conflicts of interest.

## REFERENCES

1. Bhan MK, Bahl R, Bhatnagar S. Typhoid and paratyphoid fever. *Lancet* 2005; 366:749–762.
2. Bhutta ZA. Current concepts in the diagnosis and treatment of typhoid fever. *BMJ* 2006; 333:78–82.
3. Crump JA, Luby SP, Mintz ED. The global burden of typhoid fever. *Bull World Health Organ* 2004; 82:346–353.
4. Bhagwan J, Bansal A, Bansal S. Atypical presentation of typhoid fever: a case report. *API Med Update* 2017; 2:68–69.
5. Dutta TK, Beerasha, Ghotekar LH. Atypical manifestations of typhoid fever. *J Postgrad Med* 2001; 47:248.
6. Khosla SN. Typhoid hepatitis. *Postgrad Med J* 1990; 66:923–925.
7. Ahmed A, Ahmed B. Jaundice in typhoid patients: differentiation from other common causes of fever and jaundice in the tropics. *Ann Afr Med* 2010; 9:135–140.
8. Zaki SA, Karande S. Multidrug-resistant typhoid fever: a review. *J Infect Dev Ctries* 2011; 5:324–337.
9. Terry JH, Loree TR, Thomas MD, Marti JR. Major salivary gland lymphoepithelial lesions and the acquired immunodeficiency syndrome. *Am J Surg* 1991; 162:324–329.
10. Schiodt M, Dodd CL, Greenspan D, Daniels TE, Chernoff D, Hollander H, *et al.* Natural history of HIV-associated salivary gland disease. *Oral Surg Oral Med Oral Pathol* 1992; 74:326–331.