Case report:

Case of Enteric Fever Paratyphoid with unusual duration of illness: Still a public health issue

[1] B Sudesh Shetty , [2]Prakash Harischandra , [3]Yajnik Mukund Kumble , [4]Mubin Ahmed , [5]Abdul Rahaman P A, [6]Shreesha Khandige

[1]Associate Professor, Dept of General Medicine , Kanachur Institute of Medical Sciences ,Deralakatte , Mangalore-575018. India
[2] Asst Professor, Dept of General Medicine , Kanachur Institute of Medical Sciences ,Deralakatte , Mangalore-575018. India
[3]Assistant Professor ,Dept of General Medicine , Kanachur Institute of Medical Sciences ,Deralakatte , Mangalore-575018. India
[4]Junior Resident, Dept of General Medicine , Kanachur Institute of Medical Sciences ,Deralakatte Mangalore -575018
[5]Junior resident ,Dept of General Medicine , Kanachur Institute of Medical Sciences ,Deralakatte , Mangalore -575018
[6]Professor and Head, Department of Pathology , Kanachur Institute of Medical Sciences, Deralakatte , Mangalore 575018
Corresponding author: Prakash Harischandra

Abstract:

Chronic fever, caused by the gram negative bacterium Salmonella para typhi may have a wide spectrum of clinical presentation. We report a middle aged man with typhoid fever, who developed pneumonitis an unusual complications in the course of the disease. Keeping respiratory symptoms of paratyphic and ruling out tuberculosis helped us to treat the case.

Introduction:

The largest burden of typhoid fever falls on the developing world which lacks an easy diagnostic test for salmonella infections leading to inadequate importance. Clinical manifestations vary from mild illness to life threatening complications[11].

The causative agent is increasingly *S.* Paratyphi (50% of *SALMONELLA* bloodstream isolates) of enteric fever in Asia . Fever in Asia, the Middle East, Africa and South America are caused by S Typhi and S.Paratyphi in decreasing order.

Case Report:

A 62-year old man from Mudipu presentedwith fever(100°F) of 20 days with onset since 2 months. Agricultural worker by occupation since the last 30 years, presented with persistent dry cough, weight loss, increased thirst since two months [8]. Low grade pyrexia with morning rise, intermittent in nature was his complaints. Patient had received oralciprofloxacin, amoxicillin and cefixime for short courses in the last two months. Patient an Arecanut plucker, smoker since 15 years. On admission patient was febrile with dry cough PR 78/min BP 100/70 mmHg. Respiratory examination was normal. Other systems were normal. Recently diagnosed type 2 Diabetes Mellitus on metformin and glimepride. He gave a history of Pneumonia 25 years back and father had succumbed to PTB 12 years back Complete blood count were normal about a week back with normal counts and platelets except for an elevated EST of 160mm in 1st hour, WIDAL test was negative, random sugar was 308 during the same time. Malaria,Dengue , Brucella serology wasnon-reactive. Total count on admission was 15300cell/cumm. Eosinophils 8%,ESR mmin 1st Hr. Blood and sputum culture were sent for culture and was started on ceftriaxone (2 gram/d). Chest x-ray showed minimal non

homogenous opacities in the bilateral lower basal zone suggestive of pneumonitis. He had good glyceimic control with oral hypoglycemic agents in the hospital[7].

Due to the initial classical low grade fever and cough sputum acid fast bacillus (AFB) was sent thrice with a single overnightsample which was negative. His sputum and blood culture was negative for any growth. Pyrexia was persistent low grade intermittent in nature with two spikes (101°F & 100°F) on alternate days. His Mantoux

test was negative. 2D ECHO and Ultra sonogram abdomen which was normal.

Repeat WIDAL was sent on the 5th day of hospitalization which was positive (O-Negative, H - 1:160) Paratyphi positive (AH- 1:320)[4]. A stool culture was sent , antibiotics was switched to cefotaxime (4g/d) with azithromycin (500mg/d). Fever subsided within 3 days and was afebrile till discharge.

The stool culture did show isolates of Salmonella Paratyphi A which was sensitive to ceftriaxone and resistant to ciprofloxacin.

Discussion:

Rarely being seen in western world hospitals, infection with S. typhi / S paratyphi remains a global health issue and an important public health concern in India. There is estimated 22 million cases with 200,000 deaths per year worldwide as per World Health Organization (WHO) due to enteric fever[6,10].

In the coastal region of Mangalore , endemic to malaria and dengue being a common entity which is normally worked up[7]. This case was unusual as this patient had varied presentation of respiratory illness and history of diabetes with an outside report having showed negative for enteric fever. Pneumonitis is seen in about 3.1% of patients of typhoid [11].

Moreover the isolation of *S*. Paratyphi A was relatively higher than *S*. Typhi in Karnataka in a study conducted in year 2004 at Manipal hospitals was seen which is line with our case [9] .

The classical picture of typhoid fever has changed with significant atypical presentation currently, which may delay the clinical suspicion of the disease. All patients who visit hospital in an endemic area would have received some treatment, which presumably has altered the presentation of the disease significantly. The clinical history history of weight loss and chronic cough elevated ESR with chest-Xray in a endemic region was leading to a diagnosis of tuberculosis with diabetes causing suspicion since sputum AFB was negative.

Ciprofloxacin was effective but there is resistance seen both in paratyphi and typhoid to the fluoroquinolones

.The patient responded well to cefotaxime and was afebrile still 2 weeks after discharge from hospital[12].

Conclusion

Variations in the clinical presentation of enteric fever is still a challenge for physicians with a necessity to be aware of all possible alterations in presentation for early diagnosis and treatment.

References

1)The CSJ, Chua KH , Thong KL. ParathyphoidFever :Splicing the Global Analyses. Int J Med Sci 2014;1 11(7) :732-741. Doi:10.7150/ijms.7768

2) Nathan ,Thielman NM, Guerrant RL. Mandell, Douglas and Bennett's principles and practice of infectioys diseases. 7th ed. Philadelphia:Churchill Livingstone/ Elsevier;2009

4) Dutta S, Dipika S, Byomkesh M, Bhaswati S, Alok Kumar D, Jacqueline LD, John W, Lorenz V S, Leon O, JohnDC, Sujit Kumar B (2006) Evaluation of new-generation serologic tests for the diagnosis of typhoid fever: data from a community-based surveillance in Calcutta, India. DiagnMicrobiol and Inf Dis 56: 359-365.

5) Arjunan and Al-Salamah. - Typhoid fever with severe abdominal pain J Infect Dev Ctries2010; 4(9):593-596.

6) Tracz DM, Tabor H, Jerome M, Ng LK, Gilmour MW. Genetic determinants and polymorphisms specific for human-adapted serovars of Salmonella enterica that cause enteric fever. Journal of clinical microbiology. 2006;44:2007-18 doi: 10.1128/Jcm.02630-05

7) Lathi N, Sudarsana J, Pushpa KK. Epidemic of Salmonella enterica serotype Paratyphi A in Calicut. Calicut Med J. 2004;2:e2

8) Grimm et al.: A young traveller presenting with typhoid fever after oral vaccination: a case report. Journal of MedicalCase Reports 2013 7:237.

9)Tankhiwale SS, Agrawal G, Jalgaonkar SV. An unusually high occurrence of Salmonella enterica serotypeParatyphi A in patients with enteric fever. Indian J Med Res.2003;117:10-2

10) Kumar S, Rizvi M, Berry N , Rising prevalence of enteric fever due to multidrug –resistant Salmonella:An epidemiological study. J Med Microbiol 2008; 57(10):1247

11) Dutta TK, BeereshaChotekar LH. Atypical manifestations of typhoid fever. J postgrad Med 2001;47:248

12) Joshi S, Amarnath SK. Fluoroquinolone resistance in Salmonella typhi and S. paratyphi An in Bangalore, India. Transactions of the Royal Society of Tropical Medicine and Hygiene. 2007;101:308-10 doi:10.1016/j.trstmh.2006.05.009