

A Rare Case of Neck Abscess Caused by *Salmonella paratyphi A*

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Abstract: A rare case of neck abscess due to *S. paratyphi* along with conventional antibiotics resistant was reported from UT of Dadra & Nagar Haveli, India. The results support that the *S. paratyphi A* is capable of causing both intestinal and extra-intestinal infections in humans. It highlights the fact that *S. paratyphi A* should be included in differential diagnosis of abscesses in individuals coming from endemic areas & should be treated accordingly. Awareness of unusual clinical presentations of *S. paratyphi* infection is important for physicians.

Keywords: *Salmonella paratyphi A*, Neck abscess, extra-intestinal infection

INTRODUCTION

Salmonella paratyphi A (*S. paratyphi A*), is Gram-negative bacterium and one of the causative agents of enteric fever. The organism bypass gastric defenses, multiply, penetrate the intestinal mucosa and disseminate via systemic circulation, causing infection [1]. The extra-intestinal infectious complications occur with *S. paratyphi A* infection is rare [2]. The selected workers have been reported extra-intestinal infectious complications like pulmonary system [3], hepatobiliary system [4-5], urogenital system [6-8], Head and neck infections [9-11], breast abscess [12-13]. This report presents a rare case of neck abscess caused by *S. paratyphi A*, a typhoidal *Salmonella* serovar, with classical presentations of enteric fever in past,

in a young male without any known predisposing factors like diabetes, immunosuppression, HIV etc.

CASE REPORT

In the month of April 2017, a 15-year-old male was presented in the outpatient department of Shri Vinoba Bhawe Civil Hospital, Silvassa, UT of Dadra & Nagar Haveli (20.27°N 73.02°E) with a complaint of painful swelling at the throat region for eight days. According to the history, the patient was suffering from fever for 25 days and treated with antipyretic and antibiotics. On clinical examination, there was a large swelling measuring about 6 X 3 cm at sub mental space. On palpation, the swelling was soft and hot to touch. An ultra sonography examination reported an intra muscular abscess. Therefore, the diagnosis on the basis of clinical and ultra sonographic examination was made as "A deep neck space abscess". For confirmation of abscess, a fine needle aspiration was carried out and pus sample was sent to the laboratory for culture identification and Antibiotic sensitivity. Also, complete blood examination was carried out to rule out any other complication. The patient was not diabetic, The value of HbA1c was 5.8, Complete Blood Count TC 6800 cells/cu.mm, Neutrophil 65%, Lymphocyte 30%, Hb 8.2%, PCV 22.8% and Platelet Count 3.03X10⁹/Liter. The Widal test was positive with 1280 A (H) titer. The pus sample processed through Gram stain revealed plenty of polymorphonuclear cells, and gram negative bacilli, later on, culture pure growth of smooth,

translucent; non-lactose fermenting colonies were obtained on MacConkey's agar. The isolate was identified as *S. paratyphi A* by Vitek-2 system (bioMérieux) and also by conventional biochemical reactions. The blood culture obtained found sterile after seven days. Serotyping of isolate suggested 2, 12 a type of antigenic structure. The Antibiotic sensitivity report suggested that the organism was sensitive to ampicillin, amoxicillin-clavulanic acid, ceftriaxone, Cefoperazone, Cefoperazone/sulbactam, Cefepime, Eratapenem, Imipenem, Meropenem, Tigecycline, Nitrofurantoin, Colistin, rimethoprim/Sulphamethoxazole.

The organism Resistant to Piperacilline/Tazobactam, Cefuroxime, Cefuroxime Axetil, Amikacin, Gentamicin, Nalidixic acid and Ciprofloxacin. On the basis of sensitivity, patient was treated for 3 days before admission. The Patients was treated 3 days with amoxicillin-clavulanic acid before to drain and debridement. The patient was treated seven days after drain and debridement of neck abscess with the same antibiotic and discharged. No recurrent abscess was observed for three months in follow-up visits.

DISCUSSION

S. paratyphi A is true pathogen, capable of causing both intestinal and extra-intestinal infections in humans. However, the inherent virulence and host resistance are the deciding factors for the different types

of manifestations. The neck abscess due to *S. paratyphi* A is very rare and only Behera et al, 2012 has reported similar case from the Yashoda Superspeciality Hospital, Andhra Pradesh, India. The previous workers have been encountered the resistance of *S. paratyphi* A to nalidixic acid [12], ciprofloxacin and levofloxacin [5]. However, the results of present investigation was suggestive that the organism was shown resistance to Amikacin, Gentamicin, Ciprofloxacin, Piperacilline/Tazobactam, Cefuroxime Axetil, Cefuroxime and Nalidixic acid. The result of antibiotic sensitivity of *S. paratyphi* A indicates the increasing trend in antibiotic resistance.

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