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AN UNUSUAL POST-OPERATIVE WOUND INFECTION WITH SALMONELLA PARATYPHI B: A CASE REPORT

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INTRODUCTION: The clinical manifestation of extra intestinal salmonellosis comprises enteric fever (typhoid and paratyphoid) and invasive infections due to non-typhoidal salmonella.¹ This case describes the clinical spectrum and outcome of a case of extra intestinal salmonellosis in a patient admitted to Teaching hospital, Bidar Institute of Medical Sciences, Bidar. Wound infection is a common surgical complication, often results in a prolonged hospital stay. It represents the most common serious complication of caesarean section. There are at least two mechanisms responsible for the development of post-caesarean wound infection: first, increased amniotic fluid and wound colonization by cervico-vaginal flora due to prolonged rupture of membranes and second, increased exogenous bacterial contamination by the skin flora due to breach in sterile techniques or an emergency surgery. Post-operative wound infections caused by Staphylococci, Escherichia coli, Klebsiella, Proteus, Pseudomonas etc, have been documented so far. We report a very rare case of post-caesarean wound infection due to Salmonella paratyphi B from a patient and who was later found to be a Salmonella carrier. This is probably the first case report in which a causative organism of post-operative wound infection is Salmonella paratyphi B, which is endogenously originated and multi-drug resistant.

KEYWORDS: Salmonella Paratyphi B, wound infection, endogenous.

CASE PRESENTATION: A 21 year old married female attended Obstetrics and Gynaecology outpatient department of Bidar Institute of Medical Sciences teaching hospital, with a history of ammenorrhoea. On clinical examination patient was diagnosed as primi with obstructed labour. Hematological investigations revealed normocytic normochromic blood picture with neutophilic leucocytosis. Patient underwent lower segment caesarean section and the wound was sutured in layer. Post-operatively the patient was empirically started intravenous amikacin, crystalline penicillin 20 lakh units, but the patient failed to respond to the treatment and on the third post-operative day, per abdomen examination revealed wound gaping and pus discharge.

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Post-operative wound

The discharge was collected from the open wound with sterile cotton swabs on 3 successive occasions and processed according to standard bacteriological procedures.^{2,3} Each time *Salmonella* paratyphi B and *Staphylococcus aureus* grown in culture. The isolates were identified biochemically and *Salmonella* paratyphi B was confirmed by agglutination with specific antisera 2, confirmed as serogroup 4, serovar b O antigen O4, H antigen phase 2 (2). The antimicrobial susceptibility was determined by the disc diffusion method as per the CLSI guidelines. *Salmonella* Paratyphi B showed multiple drug resistance and was susceptible to chloramphenicol and piperacillin performed blood and urine samples of the patient were cultured. Simultaneously and found to be sterile, but Widal test of paired sera revealed significant positive titer of 1:320 for *Salmonella* paratyphi B flagellar antigen, representing carrier state of the patient. Abdominal ultrasound was performed which revealed free fluid present in the abdominal cavity; indicating intestinal perforation by *Salmonella* paratyphi B.

DISCUSSION: Wound infection is a common surgical complication and *Salmonella* paratyphi B is the rarest etiological agent; which presents as delay in post-surgical wound healing. Previously there are very few reported cases of similar soft tissue infections.^{4,5} To our knowledge, *Salmonella* paratyphi B has never been reported to cause post-caesarean wound infection. In this case, our findings indicate that intestinal perforation is the main source of the organism as the patient is a chronic carrier for *Salmonella* paratyphi B and *Staphylococcus aureus* infection was hospital acquired. *Salmonella* continues to be a major public health problem especially in developing countries. Awareness of unusual clinical presentations of *Salmonella* infection is important to physicians and the microbiological evaluation of properly obtained specimens is mandatory in such unusual pyogenic wound infections.

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