

Tetanus Complicating Typhoid Ileal Perforation: A Case Report

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SUMMARY

Objective: Both tetanus and typhoid ileitis are endemic in poor developing nations.

This presentation aims at contributing to the list of complications of typhoid intestinal perforation.

Case Report: A 30-year old male had acute abdomen. Exploratory laparotomy revealed typhoid perforation with faecal contamination of the peritoneal cavity. Post operatively, patient initially improved until the 10th day when he developed tetanus. This resulted in his death 3 days after the onset of spasms.

Conclusion: Faecal contamination of the peritoneal cavity is a potential cause of tetanus.

The patient was neither immunized nor given adequate and appropriate antibiotics to which *Clostridium tetani* is sensitive. Ignorance and poverty contributed significantly to this mortality. Tetanus prophylaxis should be a routine component of the management of typhoid intestinal perforation.

Key Words: Tetanus, Typhoid ileal perforation, Complication, Faecal contamination

INTRODUCTION

Tetanus is an infectious disease with very high mortality. It is caused by the anaerobic spore forming bacillus, *Clostridium tetani*¹. This deadly lesion is preventable^{2, 3}. Currently there is no mandatory immunization against tetanus in many developing countries where it is endemic. Children and pregnant women have immunization schedules in most of these countries.

Combination of poor sanitation, ignorance and poverty lead to transmission of Salmonella typhoid infection. It is also preventable and many authors have reported on its many complications⁴ but not on tetanus. In October 1997, while the author was serving at Mongomo in Equatorial Guinea a young man developed tetanus following typhoid ileal perforation. This communication is a report of that case.

CASE REPORT

Mr. A. X. a 30 year old, male, poor wheelbarrow operator was admitted to the surgical unit of the General Hospital at Mongomo in Equatorial Guinea on 19th October

1997 with acute abdomen. He was in a poor clinical state. After resuscitation, which included infusion of intravenous fluid and antibiotics, exploratory laparotomy was done under ketamine anaesthesia.

Operative findings included a single wide ileal perforation and heavy faecal contamination of the peritoneum with pockets of pus. Resection, anastomosis, peritoneal lavage and primary wound closure were done.

Wound infection was noticed on the 5th day post operatively; otherwise the patient appeared to be doing well. Wound care was instituted and antibiotics were given as and when available. He was, however, unable to purchase adequate amounts of prescribed antibiotics and intravenous infusions needed for his treatment and the hospital pharmacy operated on a cash and carry basis. By the 10th postoperative day when spasms heralded the onset of tetanus he was eating a normal diet and was ambulant.

All efforts, within the very limited available resources, to save him proved abortive and he died on the 13th post operative day from respiratory arrest.

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DISCUSSION

Typhoid fever is a serious communicable disease with high morbidity and mortality³. These deaths often result from the complications of the disease. Intestinal perforation being one of them is very dangerous having almost a 100% mortality rate. Prompt surgical intervention and improved care have reduced the mortality rate over the years. Chouhan et al⁵ reported an overall mortality of 90.5% in the years 1958-1961 and 64.3% in the years 1974 – 1977. Udezue⁶ reported a mortality of 30% in 1978-1987, Adesunkanmi et al⁷ between 20% and 25% in 1989-1990 and Rahman et al⁸ 25.3% in 1984-1993.

Post operative complications are many as has been reported by Rathore et al⁹ and other workers^{5, 6, 7}. Seeing that typhoid ileal perforation causes faecal contamination of the peritoneal cavity and subsequent wound contamination every effort should be made to operate within the shortest possible time^{9, 10}. The outcome is usually good as has been shown in some studies^{4, 5}. *Clostridium tetani* is found in the intestine and is a potential contaminant of wounds in the event of intestinal perforation with faecal leakage. Tetanus manifests when the wound environment is conducive for anaerobic metabolism in the presence of this bacterium. These include necrotic tissue, calcium salts and associated pyogenic infections¹.

The surgical operation prevented death from the initial typhoid ileal perforation. Onset of spasm was about the 12th hour on the 10th postoperative day. This type is usually associated with severe disease as reported by Grell². He had primary closure despite the moderate wound infection. It is known that primary or secondary closure of the abdominal wound does not make a significant difference⁷. At the time of onset of tetanus, the surgical wound was no longer a problem.

In this patient, poverty played a vital role to his demise. Equatorial Guinea is poor and ill equipped to treat a case of generalized tetanus. When the patient developed this complication, the prediction was that he would die as many others before him. Combinations of

chloramphenicol and metronidazole; or amoxicillin, metronidazole and gentamicin; or ampiclox, metronidazole and gentamicin given in adequate doses can prevent this type of complication. The patient, however, could not afford adequate amounts of these drugs because of his level of poverty. The prevailing policy of the hospital pharmacy did not help either. Meticulous wound care is mandatory especially when the immunization status is uncertain as was in this case. This did not help him as he died three days after the onset of spasms.

CONCLUSION

Faecal contamination of this nature should always be viewed as a potential source of tetanus. Such patient should be immunized both actively and passively. Again, adequate penicillin group antibiotics that the vegetative form of the organism is sensitive to should be included in the drug regimen.

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