



Case Report

TYPHOID ULCER CAUSING MASSIVE PER-RECTAL BLEEDING : A RARE CASE REPORT

DEEBA MR¹ AHMED S², SABBIR I R³

Abstract

We report a case of typhoid ulcer with severe life-threatening bleeding and discuss the management of this extremely uncommon entity. As a complication of typhoid fever, an eleven year old boy from Dhaka, Bangladesh developed massive fresh bleeding per rectum. Although there is no practical way of predicting the occurrence of such rare complications, we emphasize in this case report the wide array of pathologies that can result from typhoid fever.

Key words : Shock, P/R Bleeding, Typhoid Fever

Introduction

Typhoid and paratyphoid fever are systemic infections caused by *Salmonella enterica*, including *S. enterica* serotype Typhi (*S. typhi*) and serotype Paratyphi (*S. paratyphi*). Enteric fever is a faecal-oral transmissible disease and thus occurs in an environment with overcrowding, poor sanitation and untreated water.¹

Complications occur in 10 to 15% of patients and are particularly likely in patients who have been ill for more than two weeks. Many complications have been described, of which gastrointestinal bleeding, intestinal perforation and typhoid encephalopathy are the most important.¹ Gastrointestinal bleeding is the most common symptom and it occurs in up to 10% of patients. It results from the erosion of a necrotic

Peyer's patch through the wall of an enteric vessel. In the majority of cases, the bleeding is slight and resolves without the need for blood transfusion. In 2% of cases, however, bleeding is clinically significant and can be rapidly fatal if a large vessel is involved. Intestinal (usually ileal) perforation is the most serious complication of the disease and it occurs in 1 to 3% of hospitalized patients.¹⁻³

Intestinal bleeding in typhoid fever usually occurs from the ulcers in the ileum or the proximal colon, and the most common colonoscopic manifestations are multiple variable sized punched out ulcerations. Near the ileocecal valve, where perforation occurs most commonly, ulcers become deeper than elsewhere.² Involvement of the small intestine is nearly universal.¹ Hemorrhage and intestinal perforation are the two major complications of small intestinal typhoid infection. Therapy for hemorrhaged small intestine in typhoid fever is initially supportive, consisting of blood transfusions and administration of antibiotics. In massive and recurrent hemorrhage, consideration is given to surgical resection of involved small intestinal segment. Operative management of the complications of small intestinal typhoid infection has a high associated mortality rate.^{1,2} Here we report a case of typhoid fever with massive hemorrhage from multiple inflamed patches throughout the colon and rectum and one punched out ulcer at the mid transverse colon which was successfully treated conservatively by blood transfusion and administration of antibiotics.

Case report

An eleven year old Bangladeshi boy presented to Square Hospital emergency with the complaints of

1. Dr. Musrat Rahman Deebea, Associate Consultant, Department of Ped.Surgery, Square Hospital Limited
2. Dr. Ahmed Sayeed, Consultant, Department of Pediatric ICU, Square Hospitals Limited
3. Dr. Imran Rahman Sabbir, Clinical Staff, Department of Ped.Surgery, Square Hospitals Limited

Correspondence to: Associate Professor Dr. Musrat Rahman Deebea, Department of Pediatric Surgery, Square Hospitals Limited, Dhaka, E-mail : musratrahman0311@gmail.com

passage of fresh blood per rectum for one day which was copious in amount associated with fever, nausea, recurrent vomiting and occasional abdominal pain for 1 month. Fever was high grade (maximum recorded temperature 104°F), intermittent, associated with chills and rigor was subsided after taking oral paracetamol. He had no history of either chronic medical illness or surgical operation. There were no history of skin rash, convulsion, altered consciousness or bladder abnormalities. He was born by LUCS at term with average birth weight without any perinatal complication. He was immunized as per EPI schedule and developmentally appropriate for age. But he was not immunized with Typhoid vaccine. His physical examination on admission revealed that our patient was obese and moderately anemic. His Blood Pressure was low BP (80/40), Pulse was rapid but low in volume (152/minute), Respiration was rapid but shallow (Respiratory rate: 32/minute), he was febrile also (Temperature: 101.8°F).

His abdominal examination revealed diffuse mild tenderness all over the abdomen with no organomegaly. Per rectal digital examination revealed massive bleeding of mixed nature containing fresh as well as clotted and altered blood with very scanty stool. No mass or ulcer was noted in rectal wall. Blood profile showed a hemoglobin 8.20g/dL, White blood cells 5400/ml. Blood culture from our patient grew *Salmonella typhi*. An abdominal ultrasound of our patient revealed no abnormality. With these physical and laboratory findings we considered our patient was in hypovolemic shock and decided to transfer in Pediatric Intensive care unit from Emergency department.

Once he was admitted to our hospital's emergency department, supportive measures were performed on him, including intravenous line, intravenous infusion of normal saline and the administration of broad spectrum antibiotics in the form of third generation cephalosporine (Ceftriaxone). Patient was shifted to Pediatric Intensive Care Unit and treated there by continuous O₂ inhalation, intravenous NaHCO₃, transfusion of PRBC (Packed Red Blood Cells), FFP (Fresh Frozen Plasma). After settlement of patient, Colonoscopy was done on 5th day of admission which showed multiple inflamed patches throughout the colon and rectum. The ileo-caecal valve was found inflamed. A punched out ulcer was seen at the mid transverse colon. Biopsy revealed infective proctocolitis.



Fig.-1: Colonoscopy finding: Punched out ulcer seen in colonic mucosa

The patient had uneventful recovery by conservative treatment only. His hematochezia disappeared the next day and he was discharged in good health within ten days. After thorough check-up no other pathology was detected. The biopsy specimen of punched out ulcer of colon revealed proctocolitis.

Discussion

The common causes of lower gastrointestinal (GIT) bleeding in children are polyps, Meckel's diverticulum, trauma, inflammatory bowel disease, duplication cysts, vascular lesions and infectious colitis.⁴ Bleeding from enteric fever-related ulcers is very rare and few cases are reported in pediatric population.

Ulcerations generally occur in the terminal ileum, caecum and the ascending colon and rarely in the rest colon.⁵

Enteric fever presents with a wide variety of systemic manifestations. There are as many as 16-30 million cases of enteric fever per year, almost exclusively in the developing world caused mainly by unhygienic conditions and poor sanitation, with a mortality rate of 10%. Typhoid fever may need surgical interventions because of abdominal complications, such as intestinal perforation and bleeding, cholecystitis and gallbladder perforation, and pancreatitis; this represents the most serious complications of the illness. The ileum is mostly involved due to a high concentration and enlargement of the Peyer's patches leading to ulceration, bleeding and perforation.⁶

The major cause of bleeding in enteric fever is deep intestinal ulceration. Intestinal hemorrhages usually occur after the second week. Local proliferation of salmonella organisms in the small intestinal

lymphnodes and Peyer's patches ultimately leads to tissue necrosis and ulceration. When the process extends to erode a blood vessel, small intestinal hemorrhage ensues. The degree of bleeding may vary from microscopic bleeding in feces to massive bleeding, resulting in bad prognosis, if early surgical intervention has not been pursued.⁷

The diagnostic modalities to find out GIT bleeding are angiography, endoscopy, Meckel's scan and others.⁷⁻⁹ These were not possible in the indexed case due to rapidly deteriorating condition of the patient. The diagnosis of enteric fever is concluded in our patient on the basis of history of fever, abdominal pain and tenderness. This is further aided by Blood culture and Colonoscopy and histopathology.

The management options can be divided into conservative and interventional. Conservative management is for cases where bleeding is not continuing and the patient is vitally stable. Conservative management includes gut rest by nothing per oral, intravenous fluids, fresh blood and fresh frozen plasma transfusion, antibiotics, proton pump inhibitors, and sometimes octreotide. In patients with massive bleeding that require multiple transfusions, early surgical intervention can save lives.⁸⁻¹¹

In our case bleeding was massive but it was stopped early by conservative treatment only.

Conclusion

Even today, in many underdeveloped countries enteric fever was known to have high morbidity. The variability in its presentation, in pediatric as well as adult population makes the entity non recognizable at instances. This can result in mal diagnosis and mismanagement.

We managed a case of enteric fever presented with shock due to massive bleeding per rectum. Bleeding per rectum in children is attributed, most of the times, to rectal polyp, rectal prolapse, anal fissure, and so on. Massive bleeding per rectum in children is rarely encountered. Massive bleeding per rectum due to enteric fever related ulcers is not a common presentation of enteric fever in children. We present

a rare case of 11-year old boy presented to emergency department in shock due to massive per rectal bleeding.

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