

Non-Variceal Bleeding from a Surgical Stoma in a Patient with Portal Hypertension: Case Report

Constantinos SOFIANOS¹, Chrysis SOFIANOS², Diana ALAGEM¹, Arrin KATZ¹

¹ Life Bedford Gardens Hospital, Surgery, Johannesburg, South Africa

² Charlotte Maxeke Johannesburg Academic Hospital, Surgery, Johannesburg, South Africa

ABSTRACT

Portal hypertension is associated not only with variceal bleeding but also with bleeding from gastropathy and enteropathy changes. Bleeding from stomal portal hypertensive enteropathy changes is rare but real. In the case of stomal bleeding, there should be a high index of suspicion for liver cirrhosis and portal hypertension. Portal hypertension is considered by some as a contraindication in creating stomas. There are various medical and surgical treatment modalities, with insertion of a transjugular intrahepatic portosystemic shunt (TIPS) sometimes being the only successful and definitive form of treatment. We present a case with ulcerative colitis, cirrhosis and portal hypertension who presented with major bleeding from her ileostomy.

Key words: Cirrhosis, Portal hypertension, Stoma, Bleeding

Received: November 08, 2012 • Accepted: September 10, 2013

ÖZET

Portal Hipertansiyonu Olan Bir Hastada Stomadan Varise Bağlı Olmayan Kanama: Olgu Sunumu

Portal hipertansiyonda kanama sadece varislere bağlı olmayıp gastropati ve enteropatiye bağlı da gerçekleşmektedir. Stomadan portal hipertansiyona ikincil enteropati gelişerek kanama görülmesi nadir olmakla birlikte görülebilen bir klinik durumdur. Stomadan kanama gözlenen durumlarda karaciğer sirozu ve portal hipertansiyon görülme olasılığı yüksektir ve şüphelenilmelidir. Bazıları tarafından portal hipertansiyon stoma oluşturulması için kontrendikasyon olarak kabul edilir. Birçok medikal ve cerrahi tedavi seçenekleri bulunmasının yanı sıra transjuguler intrahepatik portosistemik şant (TIPS) yerleştirilmesi bazen tek başarılı ve kesin tedavi yöntemi olmaktadır. Bu çalışmada, ülseratif kolit, siroz ve portal hipertansiyonu olan ve ileostomiden majör kanamayla başvuran bir olgu sunulmuştur.

Anahtar kelimeler: Siroz, Portal hipertansiyon, Stoma, Kanama

Geliş Tarihi: 08 Kasım 2012 • Kabul Ediliş Tarihi: 10 Eylül 2013

INTRODUCTION

Bleeding from varices is a well-known problem in portal hypertension. In addition to varices, portal hypertension also causes mucosal and vascular changes in the lower gastrointestinal tract; massive bleeding from these changes is considered rare and its management is controversial^[1]. Bleeding from an ileostomy, ileal conduit or colostomy is a rare complication of cirrhosis and portal hypertension.

We present a case with ulcerative colitis, liver cirrhosis with portal hypertension and a portal systemic anastomosis through an ileostomy stoma. Fatal bleeding originated from a segment of the ileostomy mucosa, without any obvious varices present in the ileostomy, but with changes suggestive of portal hypertensive stomal enteropathy.

CASE REPORT

A 77-year-old African female presented to our Emergency Department with acute-onset massive bleeding from her ileostomy and collapse. This was the first episode of bleeding. The patient had total proctocolectomy 20 years previously for ulcerative colitis with the formation of an ileostomy. There was no mention of diabetes, hypertension or liver disease in the medical history. There was no history of chronic, or any, alcohol intake.

The physical examination revealed a pale patient with a blood pressure (BP) of 141/93 and a pulse rate (PR) of 89/min; there was no jaundice. She had a tender epigastrium but the remainder of her abdomen was soft with no organomegaly. Two long paramedian incisions were noted, a perineal scar and no anus. A right iliac fossa ileostomy was present, with a large amount of fresh blood extruding. No varices were seen at the ileostomy site and no bleeding from the exposed mucocutaneous part of the ileostomy was present.

The resuscitation was initiated with crystalloid infusion. Three units of blood were ordered and infusion was started upon their arrival. Her hemoglobin (Hb) started at 10 and increased to 11.1 with transfusion, but subsequently decreased to 5.5 in the next few hours. Her international normalized ratio (INR)/partial thromboplastin time (PTT) was normal.

Continued bleeding prompted investigations to ascertain the cause. A gastroscopy was first performed, which showed a normal esophagus, stomach and duodenum. There was no bleeding from these areas. A computed tomography (CT) angiogram was then performed (Figure 1). No active bleeding was identified. The angiogram showed only a dilated superior

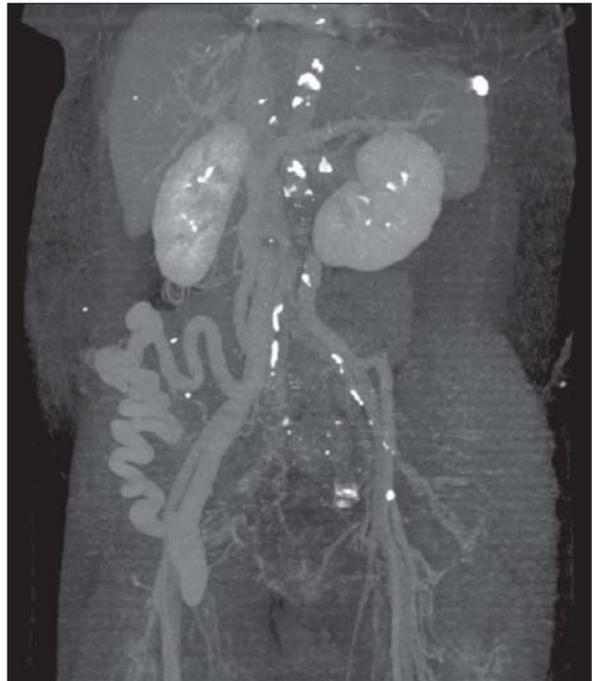


Figure 1. CT angiogram showing a dilated superior mesenteric vein and a large communicating vein connecting to the femoral vein.

rior mesenteric vein communicating with a large vessel extending to the ileostomy and connecting via another large subcutaneous vessel to the femoral vein. Caput medusae in the umbilicus was seen. Portal hypertension was suggested. The liver appeared normal. A technetium red cell scan was then ordered to identify the area of bleeding, but the bleeding worsened while waiting. The patient lost 1600 mL of blood in two hours.

It was decided to forego the red cell scan and the patient was taken to the operating theater for exploration. The exterior of the ileostomy was found to be dry and not bleeding. A stomal enteroscopy was done, which showed that a few distal centimeters of the ileostomy were filled with blood, with diffuse oozing from multiple small bleeding spots in the ileal wall. No varicosities were found. Superiorly, the ileum was clear with no bleeding.

A laparotomy was then done. The abdomen was frozen with multiple adhesions requiring extensive adhesiolysis. Massive mesenteric veins were identified suggestive of portal hypertension, and the liver was found to be cirrhotic (Figure 2). Biopsies of the liver were reported later as micronodular cirrhosis. An enterotomy was done proximal to the area, which

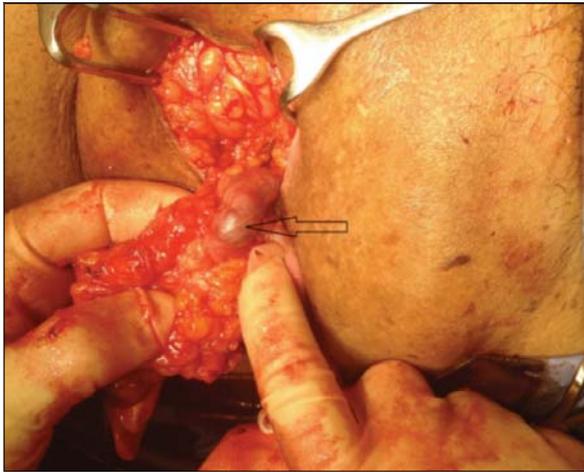


Figure 2. Large mesenteric veins.

contained blood. The opened bowel was filled with green fluid with no blood. The ileum distal to that was resected and a new ileostomy was performed. On inspection after the refashioning of the ileostomy, there was no more bleeding from the lumen.

Biopsies from the small bowel were also submitted, and showed mucosal thinning, villous blunting, fibromuscular proliferation, stromal elastotic-like changes, and a moderate number of inflammatory cells in the lamina propria.

Despite transfusing the patient with 15 units of packed cells, fresh frozen plasma (FFP) and platelets, diffuse oozing from the peritoneal surface developed postoperatively. The patient became hemodynamically unstable, and despite continued volume resuscitation and inotropes, she succumbed to a cardiac arrest a few hours after the procedure.

DISCUSSION

In this case report, we describe bleeding from an ileostomy stoma in a patient with ulcerative colitis, total proctocolectomy, liver cirrhosis, and portal hypertension.

Primary sclerosing cholangitis has been associated with ulcerative colitis, with cirrhosis and portal hypertension often following. In the presence of colectomy and ileostomy, the superior mesenteric vein then shunts with abdominal wall veins at the ileostomy site^[2]. The high pressure portal venous system in the ileum anastomoses to the low pressure venous system in the abdominal wall, resulting in a large number of varices developing at the ileostomy^[3]. Double balloon endoscopy has been useful in describing portal hypertensive enteropathy changes: erythe-

ma, telangiectasias, edema of the mucosa, and herring roe appearance^[4]. Rana et al.^[5] described ileopathy in 26% and ileal varices in 21% of their patients with portal hypertension. In the Portland experience, five of 19 patients with portal hypertension who had an ileostomy developed stomal varices and recurrent bleeding^[6]. Erosion of a subcutaneous vein or friable variceal tissue can be the cause of bleeding^[7]. Bleeding from stomal varices in portal hypertension is rare but could be fatal^[8]. Our case suggests that the same applies to stomal enteropathy.

When a patient presents with bleeding from a stoma, assessment should begin with checking the mucocutaneous portion of the ileostomy for varices and bleeding areas^[9]. The venous phase of the mesenteric angiogram can identify varices or bleeding. Double balloon enteroscopy could help in stable patients.

Portal hypertension is considered by some as a contraindication in creating stomas^[10]. Medical treatment modalities that have been used include beta blockers, somatostatin, thalidomide and others; they were not used in this case because of the severity of bleeding^[11,12].

Surgical options include applying local pressure, local silver nitrate, injection sclerotherapy, and suture ligation. Balloon tamponade with a Foley catheter can be used to control the hemorrhage. Other options include refashioning of the stoma and insertion of a transjugular intrahepatic portosystemic shunt (TIPS)^[8]. TIPS seems to improve or attenuate small bowel changes (angiodysplasia-like lesions, red spots and varices) significantly, and is sometimes the only successful and definitive form of treatment^[13,14].

This case serves to raise awareness that patients with bleeding stomas could be suffering from liver cirrhosis and portal hypertension. Portal hypertension is associated not only with variceal bleeding but also with bleeding from severe enteropathy. Prevention strategies and development of definitive diagnostic criteria and management options are needed.

REFERENCES

1. Santoro GA, Aiello C, Galloro G, Savino N, Bucci L. Massive lower gastrointestinal haemorrhage in patients with portal hypertensive enteropathy: a report of two cases. *Hepatogastroenterology* 1997; 44: 1029-32.
2. Cameron AD, Fone DJ. Portal hypertension and bleeding ileal varices after colectomy and ileostomy for chronic ulcerative colitis. *Gut* 1970; 11: 755-9.

3. Eade MN, Williams JA, Coote NT. Bleeding from an ileostomy caput medusa. *Lancet* 1969; 2: 1166-8.
4. Higaki N, Matsui H, Imaoka H, Ikeda Y, Murakami H, Hiasa Y, et al. Characteristic endoscopic features of portal hypertensive enteropathy. *J Gastroenterol* 2008; 43: 327-31.
5. Rana SS, Bhasin DK, Jahagirdar S, Raja K, Nada R, Kochnar R, et al. Is there ileopathy in portal hypertension? *J Gastroenterol Hepatol* 2006; 21: 392-7.
6. Peck JJ, Boyden AM. Exigent ileostomy haemorrhage. A complication of proctocolectomy in patients with chronic ulcerative colitis and primary sclerosing cholangitis. *Am J Surg* 1985; 150: 153-8.
7. Medina CA, Caridi JG, Wajzman Z. Massive bleeding from ileal conduit peristomal varices: successful treatment with the TIPS. *J Urol* 1998; 159: 200-1.
8. Kabeer MA, Jackson L, Widdison AL, Maskell G, Mathew J. Stomal varices: a rare cause of stomal haemorrhage. A report of three cases. *Ostomy Wound Manage* 2007; 53: 20-2, 4, 6.
9. Wang MM, McGrew W, Dunn DG. Variceal bleeding from an ileostomy stoma. *South Med J* 1985; 78: 733-7.
10. Spier BJ, Fayad AA, Lucey MP, Johnson EA, Woitowycz M, Rikkens L, et al. Bleeding stomal varices: case series and systematic review of the literature. *Clin Gastroenterol Hepatol* 2008; 6: 346-52.
11. Rana SS, Dutta U, Sinha SK, Kochnar R, Nagi B, Bhasin DK. Severe acute bleeding from portal colopathy controlled by somatostatin: a case report. *Trop Gastroenterol* 2004; 25: 144-5.
12. Jimenez-Saenz M, Romero-Vazquez J, Caunedo-Alvarez A, Maldonado-Perez B, Gutierrez JM. Beneficial effects and reversion of vascular lesions by thalidomide in a patient with bleeding portal hypertensive enteropathy. *Dig Liver Dis* 2010; 42: 232-3.
13. Matsushita Y, Narahara Y, Fujimori S, Kanazawa H, Itokawa N, Fukuda T, et al. Effects of transjugular intrahepatic portosystemic shunt on changes in the small bowel mucosa of cirrhotic patients with portal hypertension. *J Gastroenterol* 2013; 48: 633-9.
14. Wong RC, Berg CL. Portal hypertensive stomapathy: a newly described entity and its successful treatment by placement of a transjugular intrahepatic portosystemic shunt. *Am J Gastroenterol* 1997; 92: 1056-7.

Address for Correspondence

Constantinos SOFIANOS, MD
PO Box 79663, Senderwood
Johannesburg, South Africa
E-mail: drsofianos@gmail.com