Online Case Report

Peristomal varices – life threatening or luminal?

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Bleeding from the edge of an ileostomy site is a common problem. In those who have undergone a proctocolectomy with ileostomy formation in conjunction with a risk of chronic liver disease (even with normal liver function tests), this may be due to peristomal varices. If this is the case, significant, difficult-to-control and potentially life-threatening bleeding is likely in the future and may require transfusion. Improvements in radiological imaging techniques can give quick, sensitive and specific information to diagnose and guide management in this group. In those patients with major bleeding episodes, an initial conservative management policy should be adopted with the knowledge that, if bleeding persists, propranolol therapy, portosystemic shunt insertion or even liver transplantation may be indicated.

Keywords: Peristomal varices – Major bleeding – Propranolol therapy – Portosystemic shunt

Case report I

A 73-year-old man presented on a general surgical take bleeding from the edge of his ileostomy. He had initially presented to the gastroenterologists 10 years earlier with symptoms of weight loss and reflux. Upper gastrointestinal endoscopy at that time demonstrated Grade 1 oesophagitis and on examination it was noticed that he was jaundiced. Live function tests confirmed an obstructive picture. A consequent endoscopic retrograde cholangiopancreatogram (ERCP) revealed wide-spread narrowing of intra- and extrahepatic ducts, the appearances of which were consistent with primary sclerosing cholangitis (PSC). A stent was inserted during this procedure, which led to a resolution of liver function on serial measurement.

Three years later, he presented again to the gastroenterologists with loose, frequent and sometimes bloody stools. Biopsies taken at colonoscopy demonstrated an acute, active ulcerative colitis and medical management was commenced. Following a 2-year resolution of symptoms,

this medical management failed and biopsies at a further colonoscopy demonstrated low-grade dysplasia of the colonic mucosa. On the basis of this finding, the patient underwent panproctocolectomy and formation of ileostomy. Liver function tests at this time were normal.

Six months after the operation, the patient had an episode of bleeding from the edge of the ileostomy. This occurred several times over the next 2 years but the bleeding resolved spontaneously on each occasion. However, he presented to casualty with a large volume blood loss from the edge of the ileostomy requiring resuscitation and transfusion. A barium contrast study demonstrated a normal small bowel without evidence of Crohn's disease. The following day, he underwent re-fashioning of ileostomy; at operation, it was noted that there were significant venous channels at the distal bowel. The ileostomy was taken back to normal small bowel.

One year later, the patient presented to casualty with a further large bleed from the edge of the ileostomy associated with haemodynamic compromise. Following

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Figure 1 Grossly enlarged and tortuous inferior epigastric veins draining large peristomal varices in patient 1.

resuscitation and transfusion, the active bleeding point was under run with sutures to control the haemorrhage. Liver function tests were normal but an ultrasound examination of the abdomen revealed splenomegaly. A contrast CT scan demonstrated splenomegaly with enlarged splenic and portal veins and overt hepatic cirrhosis. There were also large peristomal varices fed via a very large vein joining the superior mesenteric vein close to its confluence with the splenic vein and draining predominantly through a dilated and tortuous right inferior epigastric vein (Fig. 1).

Upper gastrointestinal endoscopy showed the presence of oesophageal varices. As such β -blockade was commenced, titrated against the patient's heart rate, until a dose of propranolol 80 mg BD. To date, he has experienced two small bleeds from the edge of the ileostomy that have resolved spontaneously on each occasion. The patient is under regular out-patient review and, if he has a further peristomal variceal bleed of significant size, he may be a candidate for insertion of a portosystemic shunt.

Case report 2

A 64-year-old man underwent laparotomy and Hartmann's procedure as an emergency following a presentation with bowel perforation. Histology of the resected specimen demonstrated Crohn's disease; consequently, he underwent completion colectomy and formation of ileostomy the same year. Following this, he experienced several episodes of small bleeds from the edge of the ileostomy that resolved spontaneously. There was a significant history of alcohol abuse with evidence of chronic liver disease on both biochemical and radiological tests.

Three years after the stoma formation, he presented to casualty with a large bleed from the edge of the ileostomy. Following initial resuscitation and transfusion, liver

Figure 2 Grossly enlarged and tortuous inferior epigastric veins draining large peristomal varices in patient 2.

function tests were found to be abnormal. A contrast CT scan was performed which demonstrated features almost identical to those in Case 1 with cirrhosis, splenomegaly with portal hypertension and peristomal varices fed from the upper end of the superior mesenteric vein (Fig. 2). This patient has also commenced propranolol therapy and has had no further bleeding from the edge of the ileostomy since that time. The patient is under regular out-patient review and may also be a candidate for insertion of a portosystemic shunt if he has a bleed of significant size.

Discussion

Peristomal skin complications are a common problem in the out-patient and in-patient setting. Causes include chemical injury, mechanical injury, infection, immunological disorders and disease-related disorders.

The development of peristomal varices in patients with chronic liver disease who have undergone proctocolectomy with ileostomy formation has been described.¹⁻⁴ Edwards⁵ demonstrated the functional anatomy of these portosystemic venous channels between the parietal surfaces of the abdominal viscera and the posterior abdominal wall. In the case of peristomal varices, portosystemic shunts may develop within adhesions of the abdominal wall at the site of the ileostomy due to direct contact of the mesenteric circulation with the circulation of the posterior abdominal wall.⁶

Peristomal variceal bleeding is a significant complication in those who have colonic surgery with the formation of a stoma in the presence of chronic liver disease.⁷ Specifically, these varices can develop in a significant number in those with PSC who undergo panproctocolectomy and ileostomy for ulcerative colitis. The first episode of bleeding may be seen as early as 1 year after the formation of the ileostomy.⁸ After this first bleed,

recurrent episodes are highly likely often occurring 12 or more times each year. Bleeding that is substantial and difficult to control is common in this group and blood transfusion will be required in up to 70% and can be life-threatening.^{7,8}

Identifiable risk factors for the development of peristomal varices include oesophageal varices, advanced histological stage of PSC at liver biopsy, splenomegaly, hepatomegaly, increased serum bilirubin, decreased serum albumin and decreased platelet count.⁸

Improvements in the availability and quality of CT imaging help us to demonstrate the anatomical abnormality in this condition with clarity. Here, we see that a radiological procedure that is simple to perform will identify those patients with peristomal varices and focus the attention of the clinician to preventative measures.

Treatment options for abdominal peristomal varices include local wound care and pressure dressings, oral propranolol titrated against resting pulse, local surgical procedures,⁹ portosystemic shunts (e.g. transjugular intrahepatic portocaval shunt, TIPS) and liver transplantation.¹⁰ β -Blocker therapy has been demonstrated to decrease the risk of first bleed in patients with evidence of oesophageal varices and recurrent bleeding and mortality in patients with a history of prior oesophageal variceal bleeding.¹¹

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