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Case Report

Endovascular management of bleeding peristomal varices

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ABSTRACT

Bleeding from the peristomal varices is a rare recognised complication of stoma creation following proctocolectomy in a case of inflammatory bowel disease and associated sclerosing cholangitis. Peri-stomal varices are uncommon site of porto-systemic collateral formation in cases of pre-exiting portal hypertension and eventually a potential site of variceal bleeding. The management of peristomal variceal bleeding includes local compression, ligation, sclerotherapy and percutaneous variceal embolization; however these procedures are associated with high rate of recurrence because of the persistent raised portal venous pressure. Transjugular intrahepatic portosystemic shunt (TIPSS) is an artificial shunt created to reduce the raised portal venous pressure and can be used for the immediate relief of bleeding from peristomal varices. We are reporting a case of peristomal varices managed by transjugular intrahepatic porto-systemic shunt creation followed by coil embolization of peristomal varices and subsequently review the literature related to its management.

Keywords: Coil embolization, Peri-stomal variceal bleeding, TIPS

INTRODUCTION

Bleeding from the peristomal varices is a rare recognized complication of stoma creation following proctocolectomy in a patient with inflammatory bowel disease associated secondary sclerosing cholangitis and portal hypertension. Peri-stomal varices are uncommon site of porto-systemic collateral formation in cases of pre exiting portal hypertension.[1] Various described management of peristomal variceal bleeding includes local compression, ligation, sclerotherapy and percutaneous variceal embolization with glue, liver transplant and Transjugular Intrahepatic Portosystemic Shunt (TIPSS).[2-6] TIPSS was first described by Rosch et al in 1969 however its first application for the management of peristomal varices have been reported in 1994.[5] Since then many case reports and series have been published stating its utility in the management of bleeding from peristomal varices associated with raised portal venous pressure.[6,7]

We are reporting a case of peristomal variceal bleeding in which TIPSS was done and that shunt was used as conduit for further embolization of peristomal varices for the immediate relief of bleeding from peristomal varices. Percutaneous coil embolization has been described in literature however use of TIPSS for embolization of peristomal varices is rarely done. We did not find any manuscript describing the same.

CASE REPORT

A 59 years old female patient presented with recurrent episodes of bleeding from ileostomy site since two years. She had a history of ulcerative colitis for which total proctocolectomy and end ileostomy was done 10 years back.

Over the last two years, she had been admitted several times with the complains of peristomal bleeding for which blood transfusion was done 2-3 times. Revision of the ileostomy was done one year back, but no symptomatic improvement was achieved. On detailed investigation including liver biopsy she was diagnosed to be a case of inflammatory bowel disease associated sclerosing cholangitis of liver with cirrhotic changes and portal hypertension. Esophagogastroduodenoscopy was done which showed non-bleeding portal hypertensive gastropathy with no varices.

Inspite of low dose propranolol therapy intermittent bleeding from peristomal varices persist, so a call was sent to intervention radiology department regarding further management.

On clinical examination, there was diffuse bleeding from the muco-cutaneous junction and visible varicosities noted around the ileostomy site (Figure 1a). Her haemoglobin was 8.4gm% and serum bilirubin-1.2gm% with a MELD score of 12.

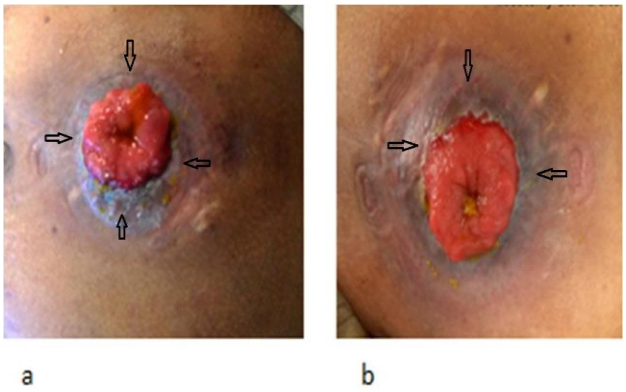

Figure 1: Clinical photograph of peri-stoma site pre (a) and post (b) TIPSS shows reduction of lumpy swelling at the muco-cutaneous junction (black arrow).

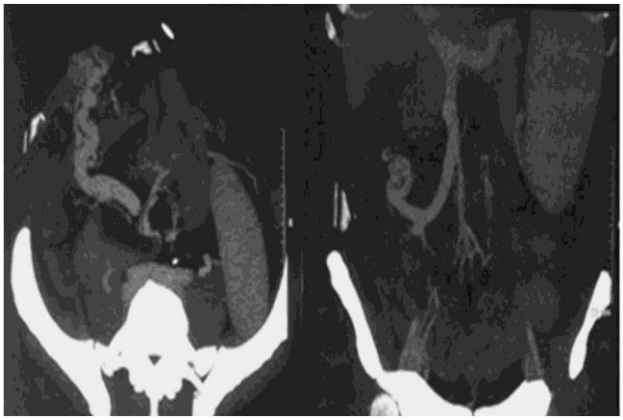

Figure 2: Axial and coronal computed tomographic images shows tortuous varicosities around the ileostoma communicating with superior mesenteric vein.

Contrast enhanced computed tomography of the abdomen including arterial and portal phase was done which showed varicosities around the ileostomy site which was communicating with superior mesenteric vein (Figure 2). Spleen was moderately enlarged with dilated portal vein and features of chronic liver disease were noted. TIPSS was planned to decompress the hypertensive portal circulation.

Under general anaesthesia and fluoroscopic guidance right hepatic vein was accessed and a 10mm diameter Niti Shunt was placed between right branch of portal vein and right hepatic vein. Post TIPSS shunt creation, the portal pressure dropped from 32mmHg to 14mmHg. However the ectopic varices did not show complete reversal of flow hence embolisation was planned. Micro catheter was advanced through the shunt in to superior mesenteric vein and angiogram taken which revealed dilated varices and abnormal blush around the ileostoma. Coil embolization of the varices done. Post embolisation varices were collapsed and antegrade flow restored in superior mesenteric vein (Figure 3).

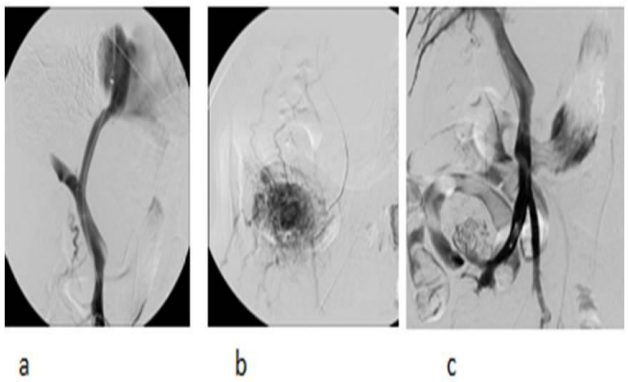

Figure 3: (a) Post TIPSS angiogram shows antegrade flow through the stent; (b) DSA Angiogram shows marked neovascularization and abnormal blush around the ileostoma; (c) Post coil embolisation there is complete obliteration of varices with restored antegrade flow in superior mesenteric vein.

Patient improved after the procedure and prominent visible varices at the muco-cutaneous junction subsided during the follow up evaluation (Figure 1b). Patient did not bleed from the ileostomy site till the writing of this manuscript and it has been approx. 2 years of doing the procedure.

DISCUSSION

Peristomal varices are uncommon recognised complication of ileostomies, colostomies and ileal conduits with coexisting portal hypertension[1] Varices formation around the stoma are frequently seen in patients with ileostomies after procto-colectomy for inflammatory bowel disease associated with primary sclerosing cholangitis (PSC) and secondary portal

hypertension.[2] The reported prevalence of PSC associated with IBD is varying from 2% to 7.5% which is relatively more common with Crohn's disease.[3]

Muco-cutaneous junction of the peristomas is a recognized site of portal systemic collateral formation between high pressure portal and low pressure systemic circulation.[1] The duration between stoma creation and development of peristomal varices is quite variable and depends upon the severity of associated liver disease and development of portal hypertension. The duration reported in the literature vary from 19 months to 24.5 years.[4] The estimated mortality risk associated with bleeding from peristomal varices is 3%-4% per episode, compared to the bleeding from gastro-oesophageal varices is 30-40%, but bleeding from the peristomal varices are inevitable in long run.[4] Deaths from peristomal variceal bleeding have been reported, but the majority of deaths are secondary to liver failure or massive upper GI tract bleeding.[4]

In 1968, Resnick et al were the first to describe peristomal varices in the literature when three patients suffered from peristomal variceal bleeding.[5] Since then, various management options have been described in the literature with variable outcomes including, Stoma revision, injection sclerotherapy, liver transplantation, embolisation, portosystemic shunt surgery and TIPSS.[6]

TIPSS was first described in 1969 by Rosch et al however its first utility in the management of peristomal varices was documented in 1994 and has, since then been successful in resolving bleeding in numerous cases.[5] The goal of TIPSS placement is to divert portal blood flow into the hepatic vein, so as to increase the antegrade flow from the peristomal varices to systemic circulation. In few cases peristomal varices does not regress inspite of shunt creation probably because of chronic portal venous hypertension, in those cases shunt provides a conduit for coil embolization of peristomal varices to get immediate relief from the symptom. There are documentation of increase risk of rebleeding and development of ectopic varices with the isolated percutaneous embolization which is unlikely a case with TIPSS and coil embolization through the shunt, as the TIPSS continuously provide low resistance channels for diversion of flow from portal to systemic circulation.[6,7] Hepatic encephalopathy is an inherent risk associated with TIPSS procedure. Therefore before creation of the shunt patient's mental status evaluation should be advised.

CONCLUSION

Variety of management options are available to control bleeding from peristomal varices including local compression, stoma revision, glue embolization, liver transplant, and TIPSS. Liver transplant is a definitive plan to manage bleeding peristomal varices associated with hepatic failure and encephalopathy, however TIPSS can be helpful in the management of bleeding peristomal varices associated with portal hypertension. TIPSS also provide a tunnel for coil embolisation of peristomal varices which is difficult to cannulate percutaneously.

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