

## Bleeding ectopic small bowel varices and embolisation

Published on 21.11.2016

**DOI:** 10.1594/EURORAD/CASE.14139

**ISSN:** 1563-4086

**Section:** Interventional radiology

**Area of Interest:** Abdomen Abdominal wall

**Procedure:** Embolisation

**Procedure:** Diagnostic procedure

**Imaging Technique:** Catheter venography

**Imaging Technique:** CT-Angiography

**Special Focus:** Varices Case Type: Clinical Cases

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**Patient:** 65 years, female

### Clinical History:

A 65-year-old female, with a known case of chronic HCV infection with chronic liver disease and type two diabetes, presented to our hospital with complaints of heavy PR (per-rectal) bleeding for two days.

### Imaging Findings:

Colonoscopy and EGD showed no source of bleeding.

On abdominal CTA arterial phase, there was contrast blush in the mid ileal loops. Venous phase showed varices around small bowel in left hemi-pelvis. SMV & left ovarian vein were supplying the varices in left hemi-pelvis due to portosystemic collaterals.

Right common femoral vein was punctured and access gained in the left ovarian vein via the left renal vein. Two embolization coils were carefully deployed in the ovarian vein close to the varices. Post coiling venogram showed a larger component of the varices communicating to the SMV. Portal vein was accessed and remaining part of the varices were embolized through SMV with embolization coils and gelfoam. Final venogram confirmed no opacification of varices.

The patient had uneventful recovery post procedure and was discharged 2 days later in a clinically stable condition with no further evidence of PR bleeding.

### Discussion:

Background:

Gastrointestinal bleeding is a common clinical condition that often requires intervention and causes significant morbidity and mortality [1]. The small intestine is the least common site of GI bleeding but is the commonest cause of obscure GI bleed (OGIB)[2]. OGIB is defined as loss of blood with no source identified at upper endoscopy and colonoscopy [1]. It is necessary to identify the cause and site of haemorrhage accurately, so as to institute appropriate effective therapy.

A variety of lesions may result in small bowel GI bleeding. The commonest lesions responsible for bleeding are vascular [1], with other causes being ulcers, tumours, inflammatory lesions, and medications [2]. The various vascular anomalies include angiodysplasia, telangiectasia, phlebectasia, arteriovenous malformation (AVM), Dieulafoy's lesion and varices [2]. Other rare causes of small bowel GI bleeding are haemobilia, haemosuccus

pancreaticus and aorto-enteric fistula [2].

Small bowel varices or ectopic varices are large, portosystemic venous collaterals occurring in the small intestine (or any unusual site other than the gastro-esophageal region); they are most commonly associated with portal hypertension or abdominal surgery and are uncommon causes of GI bleeding [3]. Ectopic varices can occur as isolated gastric varices, or in the duodenum, jejunum, ileum, colon, rectum and anal canal or in the peritoneum. Other rare sites include the vagina and ovaries [3].

Clinical and Imaging perspective:

If upper and lower GI endoscopy is negative in an unknown cause of persistent GI bleeding, CT angiography is a useful tool to detect unusual sources of bleeding. It also helps in further planning of patient management through either radiological embolisation or surgical intervention. Especially considering the background of liver cirrhosis and portal hypertension, unusual sites of bleeding varices should be looked for on CT angiography if all other common causes are excluded on endoscopy.

On arterial phase, contrast blush or leakage may be seen, indicating an arterial source of bleeding. Venous phase shows venous channel abnormalities such as dilated porto-systemic collaterals, and the status of portal and systemic veins.

At the same time, the status of the rest of the abdominal viscera can also be seen as in our case. Changes of cirrhosis in liver and splenomegaly were also noted pointing towards diagnosis.

Outcome:

In the past, ileal varices have been reported, though uncommon. To our knowledge, this is the only case where porto-systemic collaterals have developed between superior mesenteric and ovarian veins, and radiological intervention successfully embolised varices from the left ovarian vein and transhepatic approach to embolise from superior mesenteric vein.

**Differential Diagnosis List:** Lower GI bleeding due to ectopic varices., Arteriovenous malformation, Angiodysplasia

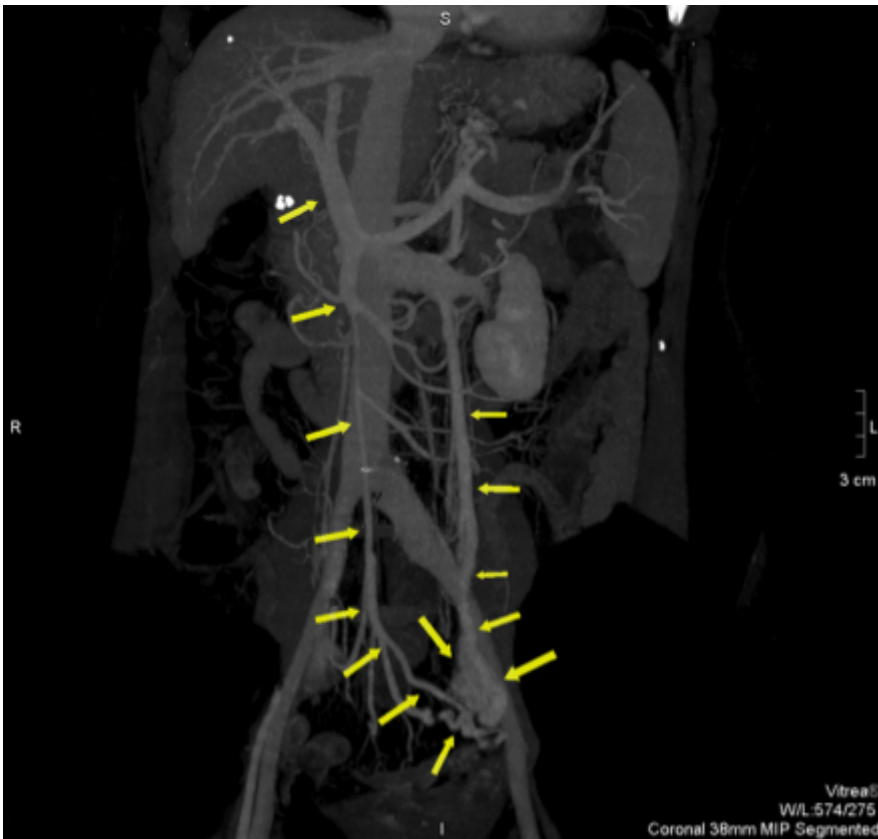
**Final Diagnosis:** Lower GI bleeding due to ectopic varices.

## References:

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- Gunjan D, Sharma V, Rana SS, Bhasin DK (2014) Small bowel bleeding: a comprehensive review. *Gastroenterol Rep (Oxf)* 2(4):262-275 (PMID: [24874805](#))
- Sarin, S. K. and Kumar, C. K. N (2012) Ectopic varices. *Clinical Liver Disease* 1: 167–172

**Figure 1**

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**Description:** CT coronal image shows communication between SMV and ovarian vein **Origin:** Adeel A M, department of radiology, Doctors hospital and medical centre

**Figure 2**

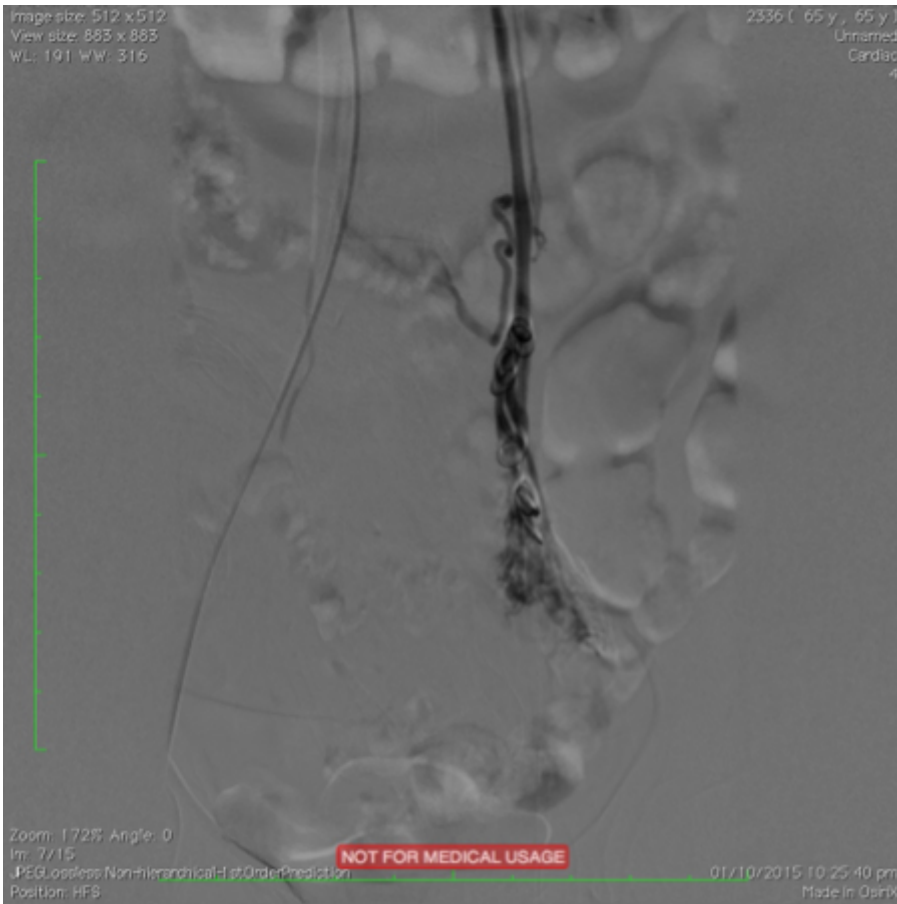
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**Description:** Axial ct image shows ectopic varices that are communicating with ovarian and superior mesenteric veins. **Origin:** Adeel A M, department of radiology, doctors hospital and medical centre, lahore, pakistan

**Figure 3**

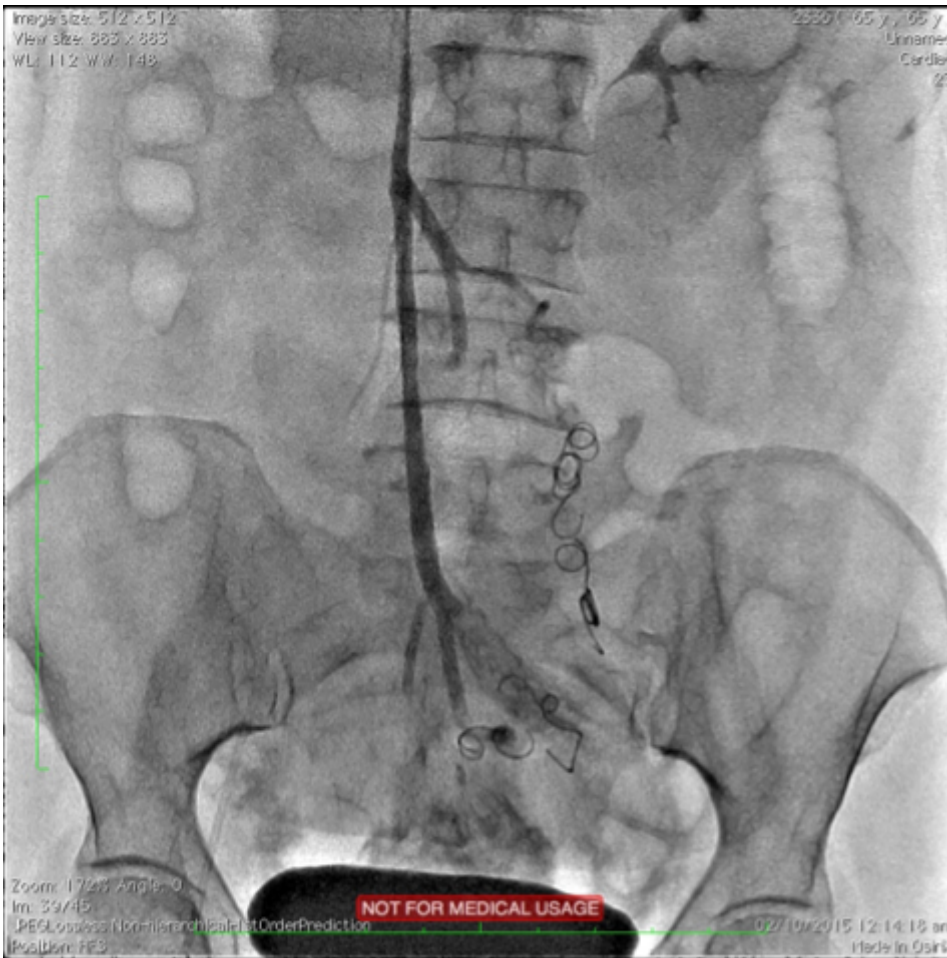
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**Description:** DSA image shows coiling of ectopic varices via ovarian vein. **Origin:** Adeel A M, department of radiology, doctors hospital and medical centre, lahore, pakistan.

**Figure 4**

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**Description:** Superior mesenteric venogram shows embolization coils in place to embolize the varices. previously placed ovarian vein coils can also be seen. **Origin:** Adeel A M, department of radiology, doctors hospital and medical centre, lahore, pakistan.

**Figure 5**

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**Description:** DSA image of superior mesenteric vein shows dilated ectopic varices in left iliac fossa.

**Origin:** Adeel A M, department of radiology, doctors hospital and medical centre, lahore, pakistan.