Peer Review File

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Reviewer A:

Very interesting case report.
Some points have to be reviewed:

Comment 1: Page 4, 43: I think, the treatment was done to stop the bleeding out of the gastric varices. This should be emphasized. “with coils”: better: with embolisation of the splenic artery.

Reply 1: Yes, the treatment was performed in an effort to stop the bleeding. (mentioned page 2 line 13, “many years of occult IGB”)- please note that the formatting seemed to have change with submission so the page umbers and lines are off. I tried to make it as clear as possible by noting the page number and lines below and by tracking changes.

Changes in the text: Page 2, line 16- 17 clarified “embolization” and removed “coils”

Comment 2: Page 5, 68: splenic vein embolisation or splenic artery embolisation?

Reply 2: It is splenic artery- thank you

Changes in the text: Page 3, line 56 changed to “artery”

Comment 3: Page 6, 75: The age of the patient here is 15 years and on page 8, 110 14 years. please check it.

Reply 3: Thank you for noticing this- the case describes the patient through time and when specific interventions were completed so that is why the age appears different.

Changes in the text: Page 5, line 92 text. Clarified to state “at the age of 14yo” to highlight that the patient had another episode of bleeding despite the previous interventions. And Page 4, line 57 “15yo” is correct, and the current age of the patient.

Comment 4: Page 6, 80: ...have been prescribed since....when?

Reply 4: The preceding sentence mentioned that the patient developed exocrine pancreas insufficiency at the age of 5yo

Changes in the text: Page 4, line 60 clarified to state “the patient developed EPI at 5 years old…prescribed for a decade”

Comment 5: Page 7, 100: source of bleeding and was likely due to surgical manipulation

Page 13, 191: such as beta blockers or surgery (not surgical techniques and not "and other" surgical techniques.

Reply 5: Thank you for noticing the grammatical errors. They have been edited.

Changes in the text: Page 5, line 95, “due to” added, and page 9 line 176 clarified to “surgery”

Reviewer B

Comment 1: The author reported the rare pediatric case with sinistral portal hypertension with GI varices. While it appears to be worth reporting, I think they should simplify and clarify his long clinical course. In the current form, I don't understand their thought process in management for this complex disease. The CT scan after small bowel resection showed patent splenic vein, and what was the mechanism of his SPH? I don't understand the mechanism to develop varices in the small intestine when splenic vein distal to left gastric vein was widely open. Were there any other thrombosis/occlusion in other portal circulation? Was the episode of GI bleeding, for which the patient underwent open surgery, unrelated to SPH? Did he/she have documented varices with bleeding in small bowel? What did they suspect the source of bleeding, varix in the stomach, or other unknown lesions?

Reply 1: Thank you for your comments. This patient had a very complicated and drawn out disease course which manifested as multiple episodes of GIB over many years and many tests/interventions. To clarify – there were no varices ever found in the small intestine with endoscopy. When the portion of resected bowel was sent to Pathology, there was no sign of vascular malformation or varices, and instead the bleeding appeared to be due to surgical manipulation. After many EGD and colonoscopies and push-enteroscopies, no varices or other abnormalities that could be a source of bleeding were ever identified in the small bowel or colon. The patient had no abnormalities within their portal circulation, and no underlying liver disease.

It is difficult to discern with 100% certainty that the gastric varix was the source of bleeding (as it was never identified to be bleeding after many investigations), however, since a long course of nadolol given empirically, there have been no other episodes of hemorrhage.

With regards to the mechanism of the bleed, there was a question and potential evidence of spontaneous thromboembolism but a CT abdo pelvis and MRI do not show any evidence of a thrombus. However, the report from the arteriogram on the comments on “the CT scan and MRI showing evidence of short gastric varices as well as mesenteric varices in keeping with previous splenic vein occlusion. The splenic vein has since recanalized. despite this, the patient had upper endoscopy which did not demonstrate any upper GI source of bleeding." This is the strongest evidence that we have for the mechanism of bleeding.

The suspected source of bleeding would have been another unknown lesion, (not a varix in the stomach), hence the capsule endoscopies and laparoscopies. There is an ultrasound that comments on a "venous varix in the region of the lesser omentum without demonstration of additional varices however overlying bowel gas may obscure appreciation of varices" so an MRI is performed which showed "there may be chronic parenchymal loss of the pancreatic body and tail with narrowing of the main splenic vein. There is an enlarged spleen 13cm with engorged collaterals portal veins predominantly the gastric omental and short gastric veins of the portal circulation. No convincing demonstration of portal systemic shunt or liver disease to suggest portal hypertension on the basis of liver disease or systemic venous drainage obstruction. No

bowel pathology is evident", thereby describing the mechanism of sinistral portal HTN that likely caused the bleeding in this patient.

Changes in the text:

Page 4, line 77-78: added potential etiology of GIB

Page 5, line 98-99- added from report that no varices were seen, and line 104-107- added that the portal circulation was unchanged.

Page 6, line 116-121: potential mechanism of bleeding added, line 133- additional potential mechanism added

Reviewer C

This manuscript was submitted as a Case Report to the Pediatric Medicine.

This is a report describing that "A Sinister Source of Gastrointestinal Bleeding in a Paediatric Patient: A Case Report".

There are a few questions and the authors have to revise some parts of this paper.

Comment 1: Title should be changed as follows: A Sinister Source of Gastrointestinal Bleeding treated by transhepatic splenic varix embolization in a Paediatric Patient: A Case Report

Reply 1: Agree – the proposed change in title is more clear and has been modified.

Changes in the text: Page 1 (title page)

Comment 2: Portal venous pressure during IVR should be described (Figure 2. 3)

Reply 2: Unfortunately there is no portal venous pressure recorded in the op-notes from the IVR and we cannot add this information.

Changes in the text: No change as there is unfortunately no data to add.

Comment 3: Regarding portal hypertension, readers are interested in spleen volume as well as platelet count. Serial changes of them (yearly) should be added.

Reply 3: Thank you for this suggestion. The spleen size (not volume) is recorded by our ultrasound techs. This information has been added. Additionally, a range of platelet count has been added to the text.

Changes in the text:

Page 2, line 70-72: added PLT count

Page 5, line 104-107: added follow-up US demonstrating spleen size and decreased volume of varices since procedure + nadolol