Response to Reviewers' Comments:

Reviewer #1

Comment 1: In Abstract: "Herein, we reported a 56-year-old male non-cirrhotic patient with acute symptomatic extensive PVST who obtained portal vein recanalization after systemic thrombolysis combined with anticoagulation." But when we come to the case itself, the authors mention: "After 5-month anticoagulation with rivaroxaban, contrast-enhanced CT scans showed that SMV and SV became patent with cavernous transformation of the portal vein". If the portal vein was replaced by cavernoma, then it was not recanalized.

Reply: Thank you for your comment. This patient had thrombosis within all vessels of portal venous system, including the main portal vein (MPV), left portal vein (LPV), right portal vein (RPV), confluence of superior mesenteric vein (SMV) and splenic vein (SV), SMV, and SV. After 5-day thrombolytic therapy, contrast-enhanced CT scans showed partial recanalization of MPV, LPV, and RPV thrombosis. After a 5-month follow-up period, contrast-enhanced CT scans showed that SMV and SV became patent, but fine collateral vessels developed around the RPV.

Comment 2: Figure 1 is not clear enough, and there is no clue to 1A, 1B, 1C and 1D.

Reply: We readjusted the sharpness of the **Figure 1** and marked A, B, C, and D in the upper left of the **Figure 1**.

Comment 3: Did the authors check if the patient developed esophageal varices, whether acutely at the onset or 5 months later, when his portal vein was replaced by a cavernoma?

Reply: Contrast-enhanced CT scans showed no esophageal varices in our case,

whether acutely at the onset or 5 months later, when fine collateral vessels developed around the RPV. Unfortunately, this patient refused to undergo endoscopy, so we cannot evaluate the presence and grade of esophageal varices on endoscopy. We have added this description in the **Case report** section. They are highlighted by yellow in the text.

Reviewer #2

Comment 1: Mentioning a specific date of admission with diagnoses may lead to pt identification; please change it to Day1 of admission as an example.

Reply: According to your suggestion, we have described the patient's conditions on the days of admission.

Comment 2. Please mention which department is our department.

Reply: We have changed our department to the Department of Gastroenterology.

Comment 3. Please comment on the abnormal data like d dimer and antithrombin three and their correlation with thrombosis.

Reply: Increased D-dimer and decreased antithrombin III should correlate with acute thrombosis in this patient.

Comment 4. What is the patient's risk factor that makes him at high risk of thrombosis?

Reply: Thank you for your comment. Unfortunately, this patient refused to undergo widespread screening for risk factors for PVST. No risk factors for PVST were found in this patient.

Comment 5. More details are needed for the enoxaparin dose calculation for example, pt weight, and did you consider Anti Xa in evaluating enoxaparin efficacy?

Reply: Thank you for your comment. Our patient was given subcutaneous enoxaparin 5000IU twice daily on the first day of admission and 8000IU (1000IU/kg) twice day from the second day until discharge. On the day 5 of admission, anti Xa level was measured and anti-Xa level was 0.05 IU/ml

(reference range: 0-0.1 IU/ml). We have added this description to the **Case report** section. They were highlighted by yellow in the text.

Comment 6. Which regimen did you consider for Urokinase that made him effective treatment for your patient? For example, How many units per KG per hr?

Reply: Thank you for your comment. Currently, there are no guidelines to recommend specific dose of thrombolytic drugs for PVST. To our knowledge, few study explored the optimal dose of thrombolytic drugs, especially systemic thrombolytic therapy with urokinase, for PVST. The dosage of thrombolytic drugs employed in our case is in accordance with that for deep vein thrombosis [1].

REFERENCES

1. Becattini C, Agnelli G. Acute treatment of venous thromboembolism. Blood. 2020; 135:305-16.[PMID: 31917399 DOI: 10.1182/blood.2019001881]