

Reviewer #1: The authors perform an interesting and original study concerning efficacy of endovascular therapy in the management of superior mesenteric vein thrombosis. The study is well-designed and provides some original data regarding primary and secondary patency. However some points could be reviewed:

- When the authors describe laboratory abnormalities, instead of presenting median lactate level or leukocyte count, they could describe how many patients had leukocytosis or hyperlactatemia and perhaps analyze if there could be a significant statistical association between these laboratory abnormalities and the study end points, as there is actually evidence that lactic acidosis and leukocytosis can be associated with higher likelihood of requiring bowel resection (Andraska E et al, J Vasc Surg Venous Lymphat Disord. 2020 Sep;8(5):748-755)

Response: Thank you for pointing this out, we have added this to the text along with median levels, since we have only one patient underwent bowel resection, we cannot conduct a statistical association. Also we referred to the paper you mentioned in our discussion.

“Only 54.2% (n = 13) patients had a reported lactate level at presentation, of them, 23.1% (n = 3) have hyperlactatemia with a median level of 1.4 mmol/L (range, 0.8 – 4.8 mmol/L). While 91.7% (n = 22) had a reported white blood cell count, where 13.6% (n = 3) have leukocytosis with a median count of 9.2 ( $\times 10^9/L$ ; range, 3.5-21.9  $\times 10^9/L$ ).” revised manuscript page 7 lines 26-page 8 line 1.

“... supporting the evidence that lactic acidosis and leukocytosis can be associated with higher likelihood of requiring bowel resection.” revised manuscript page 9 lines 26- page 11 lines 6-8.

- There is no comparison between different endovascular approaches (e. g. between thrombectomy and thrombolysis). There were no statistically significant difference regarding study end points? At least a trend? If the reason is the small sample size, which is a limitation of the study, this should be stated.

Response: We have addressed this point by adding the sentence below in the limitations section.

“However, with this number of patients (n = 24), conducting a statistical analysis was not possible.” revised manuscript page 12 lines 20-21.

- There is a study involving 43 patients with acute superior mesenteric vein thrombosis demonstrating that thrombolysis integrated in a multidisciplinary step-based approach may result in favorable outcomes and lower rates of surgical intervention in these patients (Yang S, et al. Thromb Res. 2015

Jan;135(1):36-45). Perhaps it could be interesting to compare these results with your study in the Discussion.

Response: Thank you for pointing to this important paper, the study findings have been discussed and compared to ours.

“In a study that included 43 patients who were treated for their ASMVT using multidisciplinary stepwise management, endovascular CDT was performed in 83% (n = 36) patients with or without adjunctive procedures, 20 as an initial procedure and 16 were postoperatively, their recanalization rate was 94.44% (vs. 75% in this study). Bowel resection was required in 18 patients, with 30-day mortality and overall in-hospital mortality rates of 11.63% and 16.28%, respectively. The overall 1-year survival was 83.72% (vs. 82% 5-year survival rate in our study).” Revised manuscript page 11 lines 26 -page 12 line 3.

- It would be interesting to describe how the results of the study may influence clinical practice as this is not clearly stated in the manuscript.

Response: We have addressed this point in the text.

“Overall, despite the aforementioned limitations, our study’s findings show that endovascular management for SMVT was associated with high thrombus resolution rates and improvement in patients’ clinical outcomes.” Revised manuscript page 12 lines 12-14.

Please understand these suggestions as constructive criticisms. The authors still deserve being congratulated for a relevant and well-designed study concerning this unexplored topic.

Reviewer #2: Even considering that SMVT is a rare disease, 24 cases in 20 years are too few. The research value of this paper is not high because the treatment policy has developed rapidly over the past 20 years, and the current trend is to implement PV stent together. Also, the references are too old to reflect the latest trends.

Response: Thank you for your comment. We believe this paper includes a comparable number of patients to studies found in literature. We also discussed some findings from papers that published recently such as Rabuffi et al. 2020, Liu K et al. 2020, and Yang S. et al. 2016.

Reviewer #3: This was a retrospective review of 24 patients who were diagnosed with superior mesenteric venous thrombosis (SMVT) and received endovascular therapies. The author assessed the technical and clinical outcomes as well as follow-up period afterward. SMVT is a relatively rare condition; mortality remains high due to nonspecific symptoms, delayed diagnosis, and insufficient clinician awareness. This study reported a cohort including the most cases of SMVT so far. But there are several study weaknesses. Materials and Methods

Page 1 – The authors mentioned that patients were excluded if they didn't have sufficient follow-up data. Please indicate the specific follow-up period.

**Response:** Thank you for pointing this out, we have addressed this in the text.

“Patients were excluded if they did not have sufficient follow-up data of at least one month.” **Revised manuscript page 5 lines 12-13.**

Page 2 - Endovascular therapy was initiated after failure of systemic anticoagulation. Please explain the standards of failure of anticoagulation.

**Response:** “Endovascular therapy was initiated after failure of systemic anticoagulation, determined by a lack of clinical improvement” **Revised manuscript page 5 lines 23-24**

Page 2 – Please quantitatively or semi-quantitatively explain the short-term technical success. Vascular recanalization during the IR procedure? Or contrast filling on CTA images after the procedure? Results

**Response:** Yes, we meant the vascular recanalization during the IR procedure. The text has been changed accordingly.

“Short-term technical success was measured as any improvement in SMV flow per completion angiography at the time of intervention.” **Revised manuscript page 6 lines 22-23.**

Page 3 – What are the differences between “presentation” and “symptom onset”? This sentence is confusing: “The median time between presentation and intervention was 3 days (0-15 days) from symptom onset and intervention was 8 days (2-35 days).”

Response: Yes, we agree that the sentence is confusing, so we re-worded it and is much clearer now.

“The median time between presentation to hospital and intervention was 3 days (0-15 days), while the median time from symptom onset to intervention was 8 days (2-35 days).” Revised manuscript page 7 lines 16-18.

Page 4 – How many patients survived over 5 years or 10 years? Since the median follow-up was 23 months, how were the 5- and 10- survival rates calculated?

Response: 6 and 2 patients, respectively. Therefore, we removed the 10 years survival only. However, for the 5-year survival since the 25% of the patients were survived at that time, we think this is enough percentage to conduct a Kaplan-Meier curve.

“Five-year overall survival rate was 82% (58%-100%).” Revised manuscript page 3 line 25 and page 9 lines 14-15.

Discussion Page 6 – The authors mentioned reperfusion injury in discussion part, then did the reperfusion injury occurred in presented cohort?

Response: Thank you for your point, no patient had reperfusion injury, so we deleted that paragraph.

Table 2 The proportion endovascular modality is confusing. How many patients received combined endovascular treatment? Please clear it.

Response: We addressed this in the text and table 2 footnotes.

“All 24 patients received at least one endovascular modality, while 13 (54.2%) received a combination of treatments (Table 2).” Revised manuscript page 8 lines 10-11.

Figures Please consider adding typical interventional radiologic images that reflects the endovascular treatments referred in this manuscript.

Response: We have added 2 multi-image figures to the text that show several of the endovascular treatments discussed in the manuscript (Figures 1 and 2).