Peer Review File

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Reviewer A

Comment 1: Surgical management for the case with pulmonary embolism due to popliteal venous aneurysms with thrombus formation is described in the report.
Additional preoperative images (contrast CT with venous phase, ultrasound, etc) to help understand the structure of the venous aneurysm are necessary.
I wonder whether IVC filter placement was necessary for preventing further embolic events.
Replacement of the aneurysm with any vascular graft is technically simple and so there is not much to report. The goal is to achieve long-term good results without occlusion or recurrence of embolic events originating from the replaced graft. General information on the long-term patency of homograft arterial graft (or even venous graft) should be discussed with references.
Availability of arterial homograft in general is also discussed.
As for surgical technique, replacement with saphenous vein panel graft has also been reported, and this should also be commented (J Vasc Surg Cases Innov Tech 2021;7:645-8)

Reply 1: First of all, thank you for your response. Unfortunately, the best preoperative images available have already been reported and we don't have further pre-op images.
As you say, in these procedures, also in our center, the IVC filter placement isn't performed routinely but, considering the patient's history (recurrent PE), we preferred to use this device.
We've added some considerations about patency of homograft arterial graft but we cannot find literature about long-term patency in venous pattern.
For the last consideration, we've added some considerations about the saphenous vein panel technique.
Changes in text: for patency see Page 5 line 119-124, for saphenous vein panel see Page 4-5 line 113-118.

Reviewer B

I have a number of questions for the authors of this manuscript:

Comment 1: Why did it take three episodes of pulmonary embolism before this popliteal venous aneurysm was treated?
Reply 1: First of all, thank you for your response. Unfortunately, the patient was centralized at our center only after the third episode of pulmonary embolism. The reason given to us for the surgical option delay was that there was no evidence of deep vein thrombosis on US.

Comment 2: What was the size of the popliteal vein aneurysm by ultrasound when it was first diagnosed in January 2021, and was it partially open at that time or was it totally thrombosed at that time as well?
Reply 3: The size was very similar to the last measurement, but there wasn't evidence of

thrombosis.
Changes in text: We added the size of the first measurement (see Page 3, line 72)

Comment: 3: What was the reason that anticoagulation was changed in May 2021 and in June 2021?
Reply 3: The main reason was lack of response to therapy; furthermore, the anticoagulation status was easier to monitor (with INR)

Comment 4: Was there any consideration of using the left great saphenous vein and making a panel graft, or using the small saphenous vein in the same fashion?
Reply 4: Regarding the panel graft, in our center we don't have excellent results regarding long-term patency; furthermore, we have an excellent relationship with the Treviso cell and tissue bank with great experience in the use of the homograft. It was just a choice of confidence in the graft.
Changes in text: we add information about saphenous vein panel (see Page 4-5 line 114-118)

Comment 5: Can the authors talk a little more about their operative approach, patient positioning, location of incision, etc.
Reply 5: Yes
Changes in text: We added these technical features (see Page 4, line 88-90)

Comment 6: The literature review needs to be updated and expanded. I would suggest that the authors include the manuscript from the Low Frequency Disease Consortium (VLFDC) published in 2022 (J Vasc Surg Venous Lymphat Disord 2022;10:1352-1358) and please see that there are other papers that have been published on this topic which are not in the current reference list.
Reply 6: Ok thank you for the advice
Changes in text: We added this article (see Page 4, line 109-113)