Peer Review File

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Reviewer A

1. Authors present a nice case of treatment of PE with mechanical thrombectomy. Could the authors discuss why the patient was admitted for 12 days. With flotriever use, one of the advantages is rapid improvement in hemodynamics with early discharge.

Reply 1: The patient was discharged after 2 days from the ICCU and then several second-level laboratory tests and diagnostic imaging exams were performed, to investigate the origin of the thrombus. Unfortunately, the prompt availability of these tests was limited, so the hospitalization was prolonged.

Changes in the text: we added further information (see Page 5, line 95): "due to limited prompt availability of the second-level imaging tests to investigate the origin of thrombus."

2. Could the authors why PE treatment of left PA was not attempted? Inari has smaller catheter-Triever 20 curve which can treat subsegmental PE.

Reply 2: The clot was located in both main pulmonary arteries (right and left); because their large diameter, we used a 24 F catheter to successfully removed it.

Changes in the text: we added further information (see Page 4, lines 88-89): "main right pulmonary artery (PA)" and "extended from right PA to the left PA"

3. Were PA pressures pre and post intervention recorded. That would help demonstrate hemodynamic improvement in addition to Clot removal

Reply 3: Yes, mean PA pressure pre-intervention was 28 mmHg and post-intervention was 16 mmHg.

Changes in the text: we added some data (Page 4, lines 88,91-92): "the main PA pressure of 28 mmHg was registered." "mean PA pressure was 16 mmHg."

Nice case of classic PE treatment with Flotriever. Not novel. Device is routinely used in the setting described in multiple centers in the USA.

Reply: Flow triever utilization was not already spread in Europe like in the USA, this case represents one of the first device application in Italy.

Reviewer B

This is a good illustrative case demonstrating the potential of catheter-based intervention for acute PE, but I don't believe it contributes significantly to the literature. There are three major issues that lead me to this conclusion.

First, the case is described as that of a "high-risk" PE, which by ESC/ERS guidelines is defined as the presence of hemodynamic instability. In this case, the classification of the patient as high risk is debatable since his hemodynamics were borderline, so I suspect that he was more of an "intermediate-high" risk patient. However, if he is described as "high risk," the indicated therapy is systemic thrombolysis in the absence of any contraindications, which are not obviously described in this case. Thus, one can argue that use of another therapy, including aspiration thrombectomy, over systemic thrombolysis, on the basis of catheter "availability" (line 74) for a high-risk patient is not an appropriate decision.

Reply 1: At the initial evaluation, patient was classified as an intermediate-high risk patient; during pulmonary CT examination his blood pressure worsened to critical values, making the man a high-risk patient. Due to this rapid hemodynamic deterioration, we decided to perform percoutaneous aspiration thrombectomy.

Changes in the text: we added further information (Page 3, lines 72-73,75): “During CT examination, patient’s blood pressure worsened to 75/50 mmHg.” “Due to the rapid haemodynamic deterioration with a clear hemodynamic instability”

Second, the patient described in this case report is very similar to many patients included in the PEITHO, ULTIMA, and SEATTLE II trials, as well as the ones the authors mention in their discussion, which provide much more clinically meaningful data than a single case report.

Reply 2: Initially our patient was at high-intermediate risk, but he rapidly evolved in a high-risk patient; thus, he is not similar to the patients of the mentioned trials that were at high-intermediate risk. Furthermore, the cited trials investigated the role of Ultrasound assisted thrombolysis (ULTIMA and SEATTLE II) and of early administration of low molecular weight heparin followed by dabigatran (PEITHO II).

Changes in the text: we had just added further information (see Reply 1).

Third, while I applaud the team for a successful clinical outcome, this procedure in patients like this is very common at major tertiary centers, and I don't believe that it is as unique or illustrative as a case report should be.

Reply 3: We believe that our experience was unique because we treated a high-risk patient using the 2nd generation of INARI Flow Triever Aspiration Catheter that has a novel design with a new disk shape planned to improve effectiveness of aspiration. Moreover, the use of this novel device is not already spread in Europe; we reported an exceptional early experience, in an Italian tertiary centre, of Inari Flow system application in a high-risk patient, that is an unconventional setting not already investigated in most of trials.

Changes in the text: we added some data (see Pages 4 and 6, lines 83-85 and 140-141): “The new 2nd Flow Triever aspiration”, “and a novel disk shape planned to disrupt thrombus, improving effectiveness of apiration.” and “We reported an early experience, in an Italian tertiary centre, of a high-risk patient treated with Inari Flow system”.

I appreciate the authors' enthusiasm for catheter thrombectomy, but would encourage them to present more expanded case series that describe this approach in unique patient populations.