Reviewer’s report

Title: Atrophic inferior vena cava is a marker of chronicity of intra-filter and inferior vena cava thrombosis: based on CT findings

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Reviewer: Salah Dine Qanadli

Reviewer's report:
The authors report a short experience (8 patients) of vena cava filter related-thrombosis. The topic is of interest and observations reported might bring several insights. However, I have several comments and concerns about the design and the methodology that could help the authors to improve messages for readers:

- Design:
(1) It is mandatory to clarify which population the authors are dealing with. It seems to me that patients were identified from CT scans done for several reasons. Thus, some patients were asymptomatic or all patients presented thrombosis related symptoms. Please better define the study design.
(2) The study was focused on "Filter related thrombosis". In my opinion, there is a difference between "filter thrombosis" and "filter related thrombosis". The second one means that the filter induces thrombosis, which is matter of debate but nothing is supporting this theory in the presented data.
(3) Optease and Trapease are basket shape based filters. Usual there is no penetration with this kind of filters. The observed penetration is only due to the vena cava retraction induced by post thrombotic remodeling. Introducing penetration with these filters needs to be clarified and discussed.
- Methods

(1) How patients were followed after filter insertion? Is there a systematic CT follow up? Is it possible to have some patients with filters not followed by CT?, and by the way some filters with occlusion not identified?

(2) No patient had pulmonary embolism. Filters were inserted to prevent PE in patients with DVT. Why a short-term optional (or even permanent) filters are chosen in this population? Probably long-term optional filters are more appropriate.

(3) No information was provided regarding patients symptoms, particularly regarding the new onset (filter thrombosis).

(4) No information was provided regarding the DVT location (proximal, distal, iliac, femoral….). This might help understand the potential relationship between DVT and filter thrombosis.

(5) No information was provided regarding technical success of the filter placement. Is there any relationship between filter malposition and thrombosis.

(6) Seven of the filter with thrombosis were inserted from the left side. This observation should be discussed. Usually, more filter tilt is observed from the left in comparison to from the right side.

(7) In case of proximal DVT, the preferred filter to be inserted is the one that could be retrieved from the jugular access. Why the authors choose a filter that could be removed only from the femoral access?

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No
Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.
No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.
Not relevant to this manuscript

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