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: Dalibor Musil

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According to the 9-th ACCP guidelines in patients with acute proximal DVT/PE and contraindication to anticoagulation, the use of IVC filter (Grade 1B) is recommended. In some cases caval thrombosis is serious side effect. CT/CTV examination is diagnostic method of first choice. Authors try to establish the role of CT in the diagnosis of IVC filter-related thrombosis.

In the retrospective study 8 patients undergoing an IVC filter placement for acute DVT of the leg, developed acute filter-related thrombosis. In all cases it was DVT provoked by underlying serious disease.

Please answer the following questions:

1. Authors originally retrospective evaluated a group of 562 patients undergoing IVC filter placement, of which only 8 patients developed IVC filter-related thrombosis and were included into this study. Was IVC filter in other 554 patients removed or they didn´t develope any thrombosis?

2. Which venous segments were primary involved, especially in the two survivors?

3. Why in CT study only 90 patients and in CTV study only 80 patients were involved (not 562)?

4. How many CT or CTV examinations were performed during the follow-up for each patient? What were the clinical indications for serialized CT/CTV scans at 8 followed patients - routine IVC filter follow-up, thrombosis related signs/symptoms or another cause (table 2)?

5. Caval thrombosis occured very early after filter insertion (6-18 days). How the thrombosis was diagnosed, accidentally or based on some clinical signs or symptoms of recurrent DVT? It is reported that none of patients suffered from PE.
6. What was the interval between the filter insertion, filter penetration and secondary IVC atrophy? It is only reported that „the median interval between filter insertion and IVC agenesis was 8.62±1.41 months”. IVC agenesis is not the correct term.

7. Fibroid strip along the original track of IVC below the filter means that filter was eventually placed out of the atrophic IVC?

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

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.
Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.
Yes

**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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