Reviewer’s report

Title: Application of a new blood flow regulator in aortic endovascular therapy

Version: 0 Date: 08 Nov 2019

Reviewer: Kanhua Yin

Reviewer's report:

Liu et al. reported a case series with 14 patients who received TEVAR and a self-designed blood flow regulator.

Major:

1. The authors failed to report the postoperative complications clearly. Please use the clear definitions of AKI, ischemic hepatitis/hepatic infarction, TIA, peripheral vascular diseases, etc. as criteria when reporting the postop complications.

- Table 2: It is hard for readers to inference from these numbers. Please either delete or use bar charts to show the differences.

- As shown in table 1, it seems that quite a few patients suffered TIA and AKI after receiving this stent. Any explanations and comments on that?

- For patient 13, was his ruptured AAA associated with the stent?

2. In a short-term follow-up (mean 14.7 mo), the authors reported two death cases, one re-op case because of type III endoleak, and a recurrence of type B dissection at the distal end of the stent. Although not all these were due to the procedure, I do not think these outcomes were encouraging.

3. The patient selection processing was not clearly stated. What criteria the authors used to enroll the patients (aneurysm location, entry tear location, age, comorbiditie..... )?

4. Please included a figure or video to illustrate the unique features of the new blood flow regulator.

5. In the discussion, many conclusions are merely speculations without supporting evidence. It may be more appropriate to focus the discussion on the design and technical innovations rather than the outcomes since this is a 14-patient case series with no control.

6. Compared with a similar product, what would be the significant advantages of this regulator? Please discuss.
Minor

1. Please summarize the information contained in Table 1 as statistics, and you may consider putting the original table in the appendix.

2. Page 9, line 37-42: what do you mean by "a low accuracy of localization"?

3. Professional language editing is needed.

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