

INVITED COMMENTARY

Safe Trip and Planned Landing on Healthy Runways: The Only Way to Go for Avoiding Type 1B Endoleaks

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From the very beginning of the endovascular aneurysm repair (EVAR) revolution, the main concern of vascular practitioners has been to obtain a solid, durable seal to the diseased aorto-iliac segment, both distally and proximally. The aortic neck has been studied widely in pivotal trials and subsequent morphological studies, leading to different innovative designs for enhancing precision, conformability, seal, and fixation. However, iliac limbs and iliac landing zones have been featured in fewer papers in the literature and current devices offer few innovations for this segment, other than engineering developments. To overcome these limitations, several techniques (extension into the external iliac, bell bottom, parallel grafts, and branched devices) have been developed, aiming for an enhanced safety and durability of the distal seal, and with varying results.

Detailed reports on type IB endoleaks (TIBE) are few and small.^{1–3} This gives added value to the study by Chiara Mascoli and the vascular team from Bologna University, highlighted in the current issue.⁴ Based on 616 consecutive EVAR procedures followed for at least 24 months, they claim a TIBE rate of 2.3% and highlight the relevance of non-generous oversizing (<10%) and incomplete coverage of the common iliac artery (CIA; ending > 10 mm above the bifurcation) in their development. Short (<40 mm) and dilated CIAs may also have a role to play; however, this well known relationship is seeing an interesting decrease in the cut off values considered for an increased risk of TIBE (from 24 mm⁵ to > 18 mm^{2,6} to 15 mm in the present study).⁴ It is fair to say that CIAs > 18 mm can be truly considered as aneurysmal, and may share the same evolutionary concerns as aortic necks > 30 mm.

The very nature of this study, retrospective and with a low number of events, prevents it from making a critical impact on the current evidence and daily practice recommendations. The sample was treated with four different endografts, and tortuosity and thrombus burden were only assessed marginally, and a propensity score matching

strategy for selecting controls was not applied. Despite these limitations, and although this study does not reinvent the wheel, few studies can be found that confirm all the known risk factors for TIBE in a single paper. This makes it particularly meaningful and should be considered as a prompt to encourage future, well powered studies. Long term data from the big EVAR trials in the early 2000s are available, and new generation devices also have completed a decent post-marketing follow up to confirm associations, build a large body of evidence, and help in decision making. They are all awaiting brave pilots to fly into cloudy skies to look for a brighter, evidence driven horizon. As with any flight, pre-operative planning and wise device choices are the key. And, if the aeronautical parallel can be forgiven, landing safe remains crucial for any (endovascular) trip.

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