

INVITED COMMENTARY

Commentary on 'MRI with a Weak Albumin Binding Contrast Agent can Unmask Additional Endoleaks in Patients with Enlarging Aneurysm After EVAR'

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After endovascular aneurysm repair (EVAR), an enlarging aneurysm is a concern as it suggests continued pressure and persistent risk of rupture. Improved visualization of endoleaks is therefore desirable, offering, as an alternative to open conversion, therapeutic targets to reverse the tendency for growth. In previous work by Habets et al., blood pool agents have been successfully used for identification of occult endoleaks.¹ The present study by the same group nicely illustrates the use of a weak albumin binding contrast magnetic resonance imaging (MRI) technique that may improve the capacity to detect and better visualize type II endoleaks.²

As the study focused on patients with growing aneurysms, inherently creating a selection bias, the true incidence of "occult" endoleaks in patients with stable or shrinking aneurysms remains unknown. The absence of formal validation against a gold standard also hinders determination of the sensitivity and predictive value of this new technique. However, these limitations do not invalidate the findings.

What remains to be determined is the implication of the endoleaks newly detected on magnetic resonance angiography. It appears undisputed that a newly found type I or III endoleak warrants repair, and therefore identifying them is most valuable. However, in only 11 of 29 patients did the MRI actually detect an endoleak not identified on standard computed tomography angiography surveillance, and the majority were interpreted as type II. In a meta-analysis by Sidloff et al., only 0.04% of patients suffered from rupture allegedly attributed to a type II endoleak.³ Also, it has recently been suggested that patients with a type II endoleak detected by standard methods may even have improved survival and equivalent aneurysm related mortality.⁴

The actual effect of invasive therapy is unclear — intervention directed at the occlusion of type II endoleaks in the 11 patients with previously undetected endoleaks was either unsuccessful or the duration of follow up was too short to render conclusive results. As MRI was not performed post-intervention, the actual failure rate may be even higher. Most importantly, no ruptures were identified. Finally, one more observation should be stressed: in 10% of patients, the cause for continued expansion was not determined, reflecting the lack of knowledge on the mechanisms of post-implant growth.

In conclusion, novel methods to improve visualization of endoleaks may be useful in some cases, but the added value and implications should be thoroughly assessed before generalization. Further research focusing on validation of the diagnostic tool and on the outcome of treatment of "newly revealed" endoleaks is necessary.

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