

Must All Type 1a Endoleaks After Chimney Endovascular Abdominal Aortic Aneurysm Repair Be Treated Intra Operative?

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Editorial

An endoleak is characterized by a leakage at the sealing zone of the endovascular treatment of abdominal aortic aneurysms (EVAR); type 1a endoleaks (EL) are the proximal sealing failure. We usually must treat all type 1a EL during the procedure to maintain the aneurysmal sac pressurized and avoid the risk of rupture [1]. EL can be successfully treated by intraoperative means with several endovascular techniques or even an open approach. The EVAR endoleak classification of standard infrarenal aneurysms can also be applied to fenestrated and branched endovascular repair of aneurysms (F-B-EVAR). It has been demonstrated in a center with a high volume of patients that any type 1a endoleak is associated with higher risk of graft-related complications and mortality [2]. However, some authors say that conservative treatment of type 1a EL should be regarded in some selected cases, such as low-flow endoleaks and unfit patients [3]. Data suggest that sac diameter increase of at least 5 mm in 1 year, although uncommon, is independently related to late mortality, either in the presence or absence of endoleak. This condition can be handled close follow up and only in a few cases it asks for early intervention [4].

So, must all type 1a endoleaks be treated intra operative? Which is the natural evolution of gutter related type 1a endoleaks?

Jason Lee et al. [5] claim that gutter-related type 1a EL represent a quite often early occurrence after alternative endovascular strategies, such as chimney endovascular aneurysm repairs (ch-EVAR). Still most of the cases seem resolve spontaneously during early to midterm follow-up and they are not associated with increased risk of aneurysm rupture. Hence, its natural history may be more benign than originally expected [5]. It appears that aneurysm rupture of secondary to persistent type 1a EL is rare, and most will seal in one year. Selected cases of early persistent type 1a EL can be securely observed [3,5,6].

A publication bearing 62 ch-EVAR cases (35 double renal and

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27 single renal) of juxtarenal aneurysms, with an average of 31.2 months follow up, reported 18 (29%) cases of early type 1a EL. During the follow-up, 13 cases (72%) were resolved conservatively, whereas 2 (3.3%) patients required another endovascular approach. The estimated renal graft patency was 88.9% in 60 months [7].

There is not enough data or protocol to establish a specified strategy for treating type 1a EL after EVAR [3,7] It is worth saying that the treatment of this complication should be done, as soon as possible, even during the procedure, if it is possible. If not, it is mandatory a regular follow-up of the patients. It is likely that condition disappears over time, usually in one year.

References

- 1 Antonopoulos CN, Kakisis JD, Giannakopoulos TG, Andrikopoulos

V, Antoniadis P, et al. (2014) Rupture after endovascular abdominal aortic aneurysm repair: A multicenter study. Vasc Endovascular Surg 48: 476-81.

- 2 O`Callaghan A, Greenberg RK, Eagleton MJ, Bena J, Mastracci TM, et al. (2015) Type 1a endoleaks after fenestrated and branched endografts may lead to component instability and increased aortic mortality. *J Vasc Surg* 61: 908-914.
- 3 Perini P, Bianchini M C, Mariani E, Ucci A, Fanelli M, et al. (2019) Systematic Review and Meta-Analysis of the Outcome of Different Treatments for Type 1a Endoleak After EVAR. *Ann Vasc Surg* 60: 435-446.
- 4 Deery SE, Ergul EA, Schermerhorn ML, Siracuse JJ, Schanzer A, et al. (2018) Aneurysm sac expansion is independently associated with late mortality in patients treated with endovascular aneurysm repair. *J Vasc Surg* 67: 157-164.
- 5 Ullery BW, Tran K, Itoga NK, Dalman RL, Lee JT (2017) Natural history of gutter-related type 1a endoleaks after snorkel/chimney endovascular aneurysm repair. *J Vasc Surg* 65: 981-990.
- 6 O'Donnell TFX, Corey MR, Deery SE, Tsougranis G, Maruthi R, et al. (2018) Select early type 1a endoleaks after endovascular aneurysm repair will resolve without secondary intervention. *J Vasc Surg* 67: 119-125.
- 7 Tran K, Ullery BW, Itoga N, Lee JT (2018) Polar orientation of renal grafts within the proximal seal zone affects risk of early type IA endoleaks after chimney endovascular aneurysm repair. *J Vasc Surg* 67:1034-1041.