HAL
open science

Is Chimney EVAR an Acceptable Endovascular Technique ?

Pierre Alric, Ludovic Canaud

To cite this version:

Pierre Alric, Ludovic Canaud. Is Chimney EVAR an Acceptable Endovascular Technique ?. EJVES Short Reports, 2019, 42, pp.43. 10.1016/j.ejvssr.2019.01.001 . hal-02092437

HAL Id: hal-02092437

https://hal.science/hal-02092437

Submitted on 12 May 2020

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Is Chimney EVAR an Acceptable Endovascular Technique ?

Pierre Alric [a,b,*], **Ludovic Canaud** [a,b]

[a] Department of Thoracic and Vascular Surgery, Arnaud de Villeneuve Hospital, Montpellier, France
[b] PhyMedExp, INSERM U1046, CNRS, 34295 Montpellier cedex 5, France

Ballesteros-Pomar et al.[1] report a case of pararenal aneurysm treated by a chimney EVAR technique, complicated by a persistent type Ia endoleak, treated three months later by embolisation of the endoleak with coils and onyx. Although use of the Chimney EVAR technique in the management of aortic aneurysms is currently in fashion, this type of intervention constitutes an experimental model for proximal periprosthetic endoleak whose incidence is largely undervalued.

Among the therapeutic options to be discussed, it is logical to rule out the hypothesis of a fenestrated endoprosthesis if the patient is symptomatic, but several options could be proposed including hybrid surgery with visceral artery debranching and aortic endoprosthesis, homemade fenestrated endoprosthesis, or open surgery with retroperitoneal access. It is therefore a pararenal aneurysm that could be effectively treated by open surgery with short duration suprarenal clamping. The results of conventional AAA surgery have been detailed by several authors (Steinmetz,[2] Aune, Ballotta, Paolini), from population databases (Jetty, Patel[3]), national registers (Mani), major prospective trials (Zwolak[4]), or large meta-analyses (Bahia, Hennebiens[5]). With mortality rates at one and three months of 2.2% and 3.9%, respectively, in a population of high risk surgical patients, conventional AAA surgery is an effective and reliable strategy that can be proposed as a second line solution in the situation of anatomical contraindications to performing simple endovascular treatment. For many authors, the results of pararenal aneurysm surgery with proximal aortic clamping of less than 30 minutes are comparable.

The present authors believe that the chimney EVAR technique should only be considered after having eliminated all other solutions, because this technique is not a reliable surgical technique for the management of aortic aneurysmal pathology and should find its real indication only following accidental coverage of aortic branches.

REFERENCES

1 Ballesteros-Pomar M, Taneva G, Austermann M, Fdez-Samos R, Torselllo G, Donas K. Successful management of a type b gutter-related endoleak after Chimney EVAR by coil-assistant onyx embolization. *Eur J Vasc Endovasc Surg* 2019 [in this issue].

2 Steinmetz E, Abello N, Kretz B, Gauthier E, Bouchot O, Brenot R. Analysis of outcome after using high-risk criteria selection to surgery versus endovascular repair in the modern era of abdominal aortic aneurysm treatment. *Eur J Vasc Endovasc Surg* 2010;**39**:403—9.

3 Patel VI, Lancaster RT, Conrad MF, Lamuraglia GM, Kwolek CJ, Brewster DC, et al. Comparable mortality with open repair of complex and infrarenal aortic aneurysm. *J Vasc Surg* 2011;**54**:952—9.

4 Zwolak RM, Sidawy AN, Greenberg RK, Schermerhorn ML, Shackelton RJ, Siami FS, Society for Vascular Surgery Outcomes Committee. Lifeline registry of endovascular aneurysm repair: open repair surgical controls in clinical trials. *J Vasc Surg* 2008;**48**:511—8.

5 Henebiens M, Vahl A, Koelemay MJ. Elective surgery of abdominal aortic aneurysms in octogenarians: a systematic review. *J Vasc Surg* 2008;**47**:676—81.