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CONCLUSIONS

The present multicenter study confirms that EVPAR after initial prosthetic aortic surgery is a feasible and safe alternative to open reconstruction, with relatively low perioperative mortality and morbidity in selected cases. At long-term follow-up, treatment with bifurcated stent grafts was durable, with low reintervention rates. Aortouniiliac stent grafts and endovascular tube grafts appeared less durable, requiring more reinterventions. The long-term results of EVPAR in these 58 patients show that endovascular exclusion of anatomically suitable PAAs with bifurcated stent grafts can be considered as the first-choice treatment option. However, EVPAR requires an individualized approach that takes anatomic considerations into account.

AUTHOR CONTRIBUTIONS

Conception and design: JTB, EW, JD, FM, JT, JV Analysis and interpretation: JTB, EW, JD, JT, JV Data collection: JTB, EW Writing the article: JTB, EW, JV Critical revision of the article: EW, JD, FM, JT, JV Final approval of the article: JTB, EW, JD, FM, JT, JV Statistical analysis: JTB, JD, JV Obtained funding: Not applicable Overall responsibility: JV

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Submitted Nov 23, 2010; accepted Apr 19, 2011.

INVITED COMMENTARY

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This study from Ten Bosch et al reports the technical success and outcomes after endovascular para-anastomotic aneurysm repair (EVPAR) for the most common graft-related complication after aortic reconstruction: anastomotic pseudoaneurysms and true arterial aneurysms.¹ This experience includes 3-year outcomes on patients having been treated for a range of aneurysm pathology >12 years after aortic operation; including 13 who underwent EVPAR for symptomatic or ruptured aneurysms. The 95% techni-

cal success rate of EVPAR was consistent throughout the early and late parts of this study and is a testament to the feasibility of stent graft placement and its short-term durability in this setting.

Importantly, the excellent technical success rate in this report reflects a necessary selection of patients with favorable aortoiliac anatomy (adequate access and seal zones) and clinical presentation (absence of infection) before undertaking the procedure. The ability to perform EVPAR after open aortic reconstruction may also reflect that most proximal para-anastomotic aneurysms are the result of suture lines being sewn relatively distal to degenerated aortic wall. Although this technical misstep of open aortic reconstruction predisposes to suture line failure over time, it may also lend itself to a proximal landing or seal zone for EVPAR should an aneurysm form.

Without information on the number of patients treated with open operation for these indications during the study period, this report oversimplifies the treatment of this clinical scenario. Most notably, no patients in this study had signs of graft infection, which is a leading cause of anastomotic failure and aneurysm formation. In this case, the reader is left to assume that these high-risk patients were selected out of this EVPAR cohort and treated with open operation. Although this bias is understandable, the reader should not assume that treatment of all patients with this aortic pathology carries the low morbidity and mortality reported in this study. Finally, none of the repairs in this study used proximal extension adjuncts, such as chimney grafts or fenestrations, to obtain a seal, an observation that underscores the conservative selection of patients in this report. Although this report does not provide numbers of patients excluded because of unsuitable proximal neck anatomy during this period, it may be that the utility of EVPAR can be extended to more complex para-anastomotic aneurysms as the utility of fenestrations becomes better characterized.² The authors are to be congratulated on their work and important contribution to the literature on endovascular aneurysm repair.

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