Response to "Comment on 'Short- and Mid-term Outcomes of Cryopreserved Abdominal Aortic Allografts Used as a Substitute for Infected Prosthetic Grafts in 200 Patients"'

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Response to Dr. Tresson's comment

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We thank Dr. Tresson for highlighting an important issue regarding the use of new strategies currently available for the management of arterial graft infection.

Although polymerase chain reaction (PCR) is an interesting tool in the diagnostic armamentarium, its contribution appears limited since it allows identifying a microorganism in only 20% of negative cultures[1].

Genus-specific PCR may be more accurate, but discordant results in the identification of the pathogen responsible for vascular graft infection between culture and PCR have been shown in 60% of patients[2]. In addition, PCR is not yet widely used to detect antibiotic resistance genes, is not available for all bacteria, and does not provide information on the minimum inhibitory concentrations.

18F-fluoro-D-deoxyglucose positron emission tomography-computed tomography (18F-FDG-PET/CT) seems to be a promising technique to confirm vascular graft infection. Although its sensibility is good, its specificity remains low[3].

In our experience, 18F-FDG-PET/CT had a limited place because all patients had a major infection criterion before surgery. In case of uncertain diagnosis, patients were monitored and the diagnosis was confirmed or not depending on the evolution of the inflammatory syndrome and CT-scan findings.

In our opinion, patients not suitable for total explantation and treated medically with antibiotics for 3 months could benefit from 18F-FDG-PET/CT by continuing antibiotic therapy throughout patients' life in case of persistent signs of vascular graft infection.

The temporary use of endograft in case of aorto-enteric fistula is theoretically a good option. Actually, in most cases, the occurrence of gastrointestinal hemorrhage is only the consequence of the erosion in the gut mucosa. True communications between the aorta and the intestinal lumen are rare and result in severe hemorrhagic shock. In addition, the incidence of bifurcated grafts decreases the likelihood to be suitable for an endograft because of the short length between renal arteries and graft bifurcation. For example, in our series, among the 56 patients with prostheto-digestive fistula, only 9 patients underwent emergency surgery and 7 of them already had a bifurcated graft.

We agree with Dr. Tresson that the outcomes still need to be improved in such a devastating condition but recent advances in the diagnosis or treatment currently available are moderately helpful in the real life. Nevertheless, they must be used whenever possible.

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2. Puges M, Pereyre S, Berard X, et al. Comparison of Genus Specific PCR and Culture with or without Sonication for Microbiological Diagnosis of Vascular Graft Infection. *Eur J Vasc Endovasc Surg*. Oct 2018;56(4):562-571. doi:10.1016/j.ejvs.2018.06.064
3. Reinders Folmer EI, Von Meijenfeldt GCI, Van der Laan MJ, et al. Diagnostic Imaging in Vascular Graft Infection: A Systematic Review and Meta-Analysis. *Eur J Vasc Endovasc Surg*. Nov 2018;56(5):719-729. doi:10.1016/j.ejvs.2018.07.010