

Infected Gore® Viabhan® endoprosthesis with carotid-cutaneous fistula: A rare complication after endovascular procedure on the carotid artery

Vincenzo Catanese, Giorgio Caddia, Eugenio Martelli

Residency Program and Division of Vascular Surgery, Department of Surgical, Microsurgical and Medical Sciences, University of Sassari, Italy

Background

Device infection is a rare complication after endovascular procedures. To our knowledge, only few cases of infection after carotid artery stenting (CAS) are reported in the literature.¹⁻³

Case Report

A 72-years-old man underwent carotid endarterectomy (CEA) at another Hospital one year before. Surgical indication was due to an asymptomatic 80-99% right internal carotid artery (ICA) stenosis. On 3rd postoperative day (POD) the patient presented a hemorrhage from the surgical wound, requiring an urgent digital subtraction angiography (DSA) of supra-aortic vessels. DSA proved the presence of ICA's pseudoaneurysm (PSA), therefore a Gore®

Viabhan® endoprosthesis was successfully implanted, in order to exclude the PSA. After a period of apparent health, the patient came back to his physicians presenting dehiscence of the surgical wound, which required multiple surgical revisions and extensive antibiotic therapy, without recovery. Thus, the patient was presented to our attention with a small exudative dehiscence of the surgical wound. A positron emission tomography (PET) showed intensive activity through the right carotid axis, meaning an infection of the carotid Viabhan®, with a carotid-cutaneous fistula. Therefore, we decided to perform surgical *en-bloc* removal of the endograft, the carotid vessels and carotid-cutaneous fistula, followed by right common carotid-ICA bypass with great saphenous vein (GSV) (Figure 1). A culture test of the stent demonstrated a Methicillin Resistant Staphylococcus Aureus infection. No neurological deficit was presented during the postoperative period, but unfortunately the patient died at the 14th POD, close to home discharge, due to a fatal acute myocardial infarction.

Conclusions

Stent infection is a possible and potentially fatal complication after CAS. Conservative treatment presents a mortality reported in the literature of about 50%. Total surgical removal followed by a carotid-carotid bypass in an autologous vein represents the treatment of choice, although mortality remains high.

Correspondence: Vincenzo Catanese, Residency Program and Division of Vascular Surgery, Department of Surgical, Microsurgical and Medical Sciences, University of Sassari, Sassari, Italy.
E-mail: dr.vincenzocatanese@gmail.com

Key words: Neurovascular diseases; meeting.

Conference presentation: 9th Annual Meeting of the International Society of Neurovascular Disease (ISNVD), May 30th-31st, 2019, Ferrara, Italy.

This work is licensed under a Creative Commons Attribution 4.0 License (by-nc 4.0).

©Copyright: the Author(s), 2019

Licensee PAGEPress, Italy

Veins and Lymphatics 2019; 8:8438

doi:10.4081/vl.2019.8438

References

1. Kaviani A, Ouriel K, Kashyap VS. Infected carotid pseudoaneurysm and carotid-cutaneous fistula as a late complication of carotid artery stenting. *J Vasc Surg* 2006;43:379-82.
2. Desai JA, Husain SF, Islam O, et al. Carotid artery stent infection with *Streptococcus agalactiae*. *Neurology* 2010;74:344.
3. Son S, Choi NC, Choi DS, Cho OH. Carotid stent infection: a rare but potentially fatal complication of carotid artery stenting. *BMJ Case Rep* 2014;27:2014.

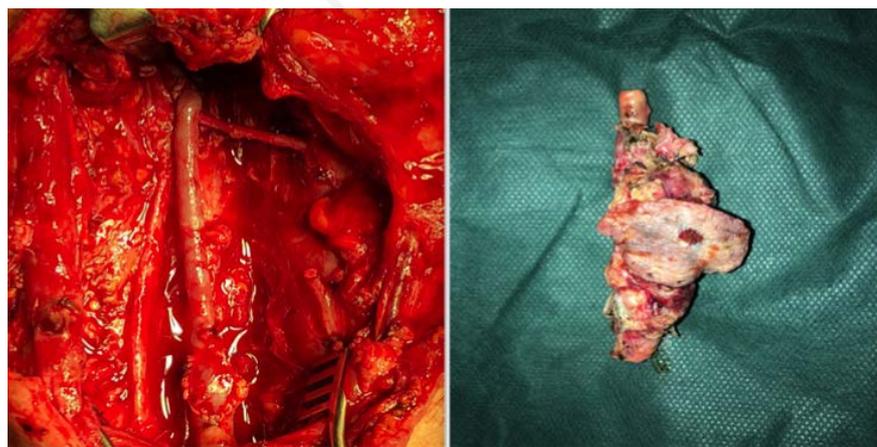


Figure 1. Carotid-carotid bypass with great saphenous vein (on the left); endograft, carotid vessel and carotid-cutaneous fistula removed (on the right).