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Chronic Infective Endarteritis Due to *Propionibacterium Acnes* on Aortic Prosthetic Graft

Endarteritis infecciosa crónica por Propionibacterium acnes sobre tubo prótesico aórtico

To the Editor,

A 62-year-old man was admitted to his reference hospital with right hemiparesis, dysphasia, and fever. He reported experiencing general malaise and shivers in the preceding weeks.

In his cardiovascular history, the patient had undergone a type A dissection at age 46. This required ascending aortic and aortic arch replacement surgery by means of the Cabrol technique with 2 woven Dacron[®] grafts. Two years earlier, he had been admitted to hospital for an episode of abdominal pain; computed tomography revealed splenic infarction and ascites. *Propionibacterium acnes* was isolated from the ascitic fluid. He was discharged in an asymptomatic state with diagnosis of primary neutrophilic

peritonitis. Subsequently, the symptoms recurred and he was readmitted 1 month after onset of symptoms. Splenic abscess was suspected; he received 4 months empiric treatment with imipenem and underwent splenectomy. The pathology report revealed chronic splenic abscess and *P. acnes* was isolated from the samples.

For the next 2 years, he suffered intermittent episodes of fever and shivering. In the evaluation in his reference hospital to rule out infectious endocarditis, blood cultures and transesophageal echocardiography were performed, with negative results, and it was decided not to initiate antibiotic treatment.

During a subsequent hospital admission, he had a fever (39 °C) and was hemodynamically stable. Physical examination revealed mixed dysphasia and right hemiparesis. Sinus rhythm was found in the electrocardiogram and the chest X-ray was normal. The blood work-up showed leukocytosis (26 700/ μ L) and the brain computed tomography without contrast enhancement did not reveal any signs of hemorrhage or medial displacement. In the brain magnetic resonance imaging, an ischemic lesion was detected in the left

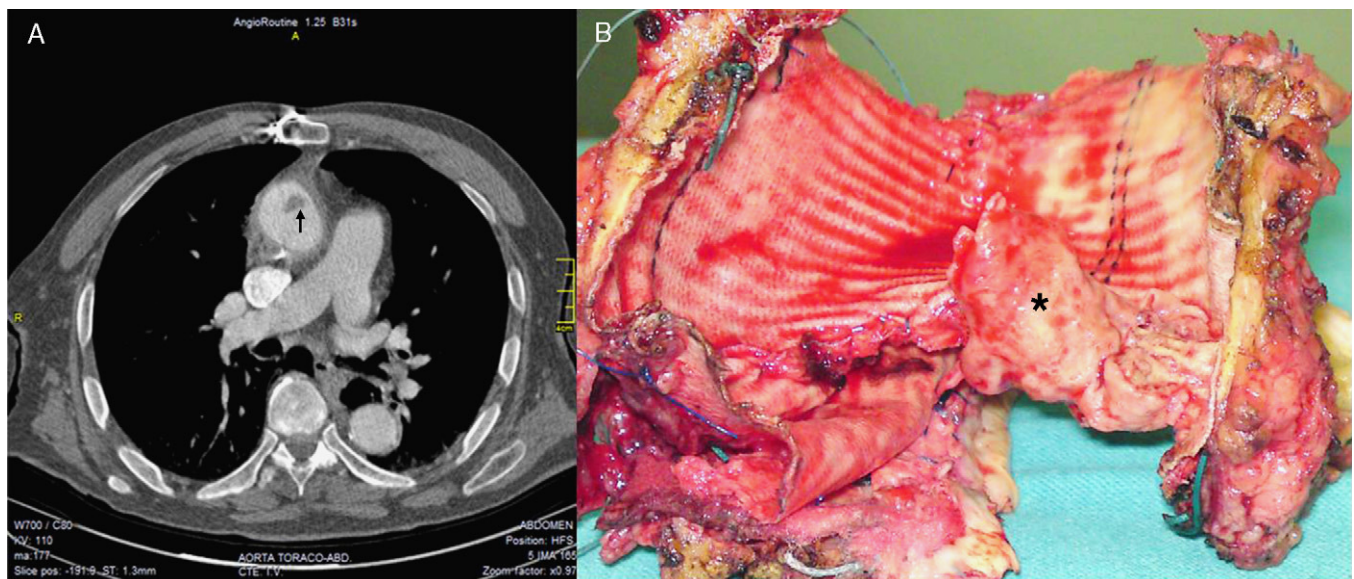


Figure 1. A, Contrast-enhanced chest computed tomography. A mass (arrow) can be seen as a filling defect in the aortic lumen. B, Surgical piece; a large vegetation (asterisk) can be seen where the two prosthetic grafts join.

temporoparietal cortex. In the face of clinical suspicion of infectious endocarditis, empirical antibiotic treatment was started with vancomycin and gentamicin. There were no signs of infectious endocarditis in the study with transesophageal echocardiography, but the contrast-enhanced chest computed tomography detected the presence of a mass (17 mm) in the lumen of the ascending aorta, anchored to the prosthetic graft (Fig. 1A). *P. acnes* was isolated from the blood cultures.

The patient was referred to our center to assess the need for aortic surgery. Given that the microorganism was highly susceptible to penicillin, treatment with penicillin G was initiated (16×10^6 U/day) and continued for 6 weeks. The signs and symptoms were interpreted as chronic aortic endarteritis, with persistent signs of infection, a large vegetation, and at least 2 embolic episodes (splenic and cerebral) despite antibiotic treatment. Thus, given the good neurological outcome, heart surgery was indicated during the active phase, 2 weeks after starting pharmacological treatment. During surgery, the presence of a grey pedunculated mass was shown, implanted at the junction of the two prosthetic grafts (Fig. 1B). The patient underwent ascending aortic replacement by the Bentall-De Bono technique with a Carbon Art[®] 25/28 valved graft, with a good outcome. The patient progressed satisfactorily and at the most recent visit, 2 years after surgery, only presented hemiparesis and mild dysphasia.

P. acnes is an uncommon cause of bacteremia. The endarteritis on an aortic prosthesis graft is an uncommon form of intravascular infection. The clinical presentation of the aortic graft infection can be insidious, often without leukocytosis or positive blood cultures, and contrast-enhanced computed tomography is the confirming diagnostic technique.¹ If clinical suspicion is high, the combination

of positron emission tomography with fluorodeoxyglucose can increase the sensitivity of the computed tomography.² Isolation of *Propionibacterium* in blood cultures should not always be interpreted as a sign of contamination, as it can be the cause of endocarditis, mainly on prosthetic material,³ given its known capacity to adhere to surfaces of foreign bodies and to produce biofilm.⁴

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