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## Letter to the editor

# Infective endocarditis on a percutaneous prosthetic aortic valve with associated glomerulopathy due to *Granulicatella adjacens*

Dear Editor,

*Granulicatella adjacens* is part of the normal flora of the mouth, bowels, and genitourinary system, and is known to be responsible for culture-negative infective endocarditis.<sup>1,2</sup> Due to its difficulty to grow in usual culture media and its resistance to many antibiotics, the diagnosis and treatment of this pathogen are a challenge for the clinician.<sup>3</sup>

An 86 year-old man, with a history of aortic stenosis treated with percutaneous implantation of an aortic valve prosthesis, presented to the emergency room complaining of interscapular pain and palpable purpura of the lower limbs for the preceding 15 days. Vital signs revealed a temperature of 36.5 °C and a blood pressure of 140/90 mmHg. The blood panel showed an acute kidney injury (serum creatinine 5.42 mg/dL, urea 208 mg/dL). Other findings were serum calcium 7.9 mg/dL, C-reactive protein 6.6 mg/dL, and N-terminal proBNP 53950 ng/dL. He had an active urinalysis, with granular and red blood cell casts, a large amount of dysmorphic erythrocytes, and 1 gram of proteinuria per day. A renal ultrasound showed kidneys of normal size and echogenicity. A computed tomography (CT) was performed to rule out aortic pathology, revealing some degree of heart failure. Immunoassays were negative for p-ANCA, c-ANCA, and anti-glomerular basement membrane antibodies. Complement C3 levels were low (51.1 mg/dL) while complement C4 levels were normal (17 mg/dL). Blood cultures showed chains of Gram-positive cocci, later identified as *Granulicatella adjacens*, and transthoracic echocardiography revealed a lesion suspicious of vegetation on the prosthetic aortic valve. A primary oral focus was suspected, and an infection of the second lower right molar was confirmed. The tooth was surgically removed.

The patient was started empirically on intravenous daptomycin at a dose of 10 mg/Kg/48 h, and later was de-escalated to ceftriaxone due to antibiogram results. Control blood cultures were negative two days after initiation of therapy, which was maintained for six weeks; surgical approach was dismissed due to age, comorbidities, and the patient's desires.

Renal function did not improve, but kidney biopsy could not be carried out because the patient was anemic and thrombocytopenic, and finally, the patient was started on chronic hemodialysis. Although discharged from hospital after an initial good evolution, the patient died three months later due to an *Enterococcus spp.* sepsis related to the permanent catheter.

Acute kidney injury occurs in about 30% of the cases of infective endocarditis. There can be many causes, mainly pre-renal and/or intrinsic involvement of the kidney. When there is parenchymatous injury, it can occur due to glomerular causes (membranoproliferative, crescentic, or acute post-infectious glomerulonephritis), tubulointerstitial nephritis (such as acute tubular necrosis or acute immuno-allergic interstitial nephritis) or vascular disease (renal infarction, abscesses). In many cases, renal involvement goes unnoticed.<sup>4</sup>

To the best of our knowledge, many cases of *G. adjacens* infective endocarditis have been published, but this is the first one on a percutaneously implanted prosthesis.<sup>5,6</sup>

## Conflict of interest

All authors declare to have no conflict of interest.

## REFERENCES

- Collins MD, Lawson PA. The genus *Abiotrophia* (Kawamura et al.) is not monophyletic: proposal of *Granulicatella gen. nov.*, *Granulicatella adiacens comb. nov.*, *Granulicatella elegans comb. nov.* and *Granulicatella balaenopterae comb. nov.* Int J Syst Evol Microbiol. 2000;50 Pt 1:365-9.
- Brouqui P, Raoult D. Endocarditis due to rare and fastidious bacteria. Clin Microbiol Rev. 2001;4:177-207.
- Durack DT. Prevention of infective endocarditis. N Engl J Med. 1995;332:38-44.
- Majumdar A, Chowdhary S, Ferreira MA, et al. Renal pathological findings in infective endocarditis. Nephrol Dial Transplant. 2000;15:1782.

5. Hernando Real S, Carrero González P, Chaves González F, González González R. Endocarditis due to *Granulicatella adiacens* in an old patient. *Med Clin (Barc)*. 2007;128:758.
6. Perkins A, Osorio S, Serrano M, et al. A case of endocarditis due to *Granulicatella adiacens*. *Clin Microbiol Infect*. 2003;9:576-7.

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