

Aortic sinus pseudoaneurysm complicating *E. aerogenes* late bioprosthetic endocarditis

Clinical Case Portal

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Abstract

A 77-year-old man presented eight months after bioprosthetic aortic valve implantation with progressive dyspnea and fever. *E. aerogenes* was isolated in culture bottles.

Introduction

Transesophageal echocardiographic revealed a pseudoaneurysm at the posterior-coronary sinus region and severe left ventricular dysfunction. About six months ago a previously TEE was considered normal

and *E. aerogenes* was isolated in culture bottles. The patient refused surgery and was treated conservatively, being finally dead.

Case Report

Patient history prior to current observation :

A 77-year old man, with a history of diabetes, arterial hypertension and implantation of a permanent DDD pacemaker for symptomatic AV block, was referred to Cardiac Surgery due to severe aortic stenosis and replacement with Carpentier n°21 bioprosthesis. A coronariography that proved to be normal was previously performed. During the next months the patient experienced intermittent episodes with fever, loss of appetite and weakness.

Clinical findings on admission, evolution and outcome :

Two and half months later he presented to our emergency department with persistent fever and chills. The results of standard laboratory analyses, chest X-ray, 12-lead ECG and his physical examination were within normal limits. *Enterobacter aerogenes* was isolated in four sets of blood culture bottles. Transesophageal echocardiography (ETE) showed no signs of prosthetic endocarditis. The patient was treated initially with vancomycin and gentamicin but developed acute renal failure from nephrotoxicity. Then, he improved clinically with a course of intravenous cloxacillin and levofloxacin and was discharged from hospital. Four months later the patient's family brought him back with intense dyspnea and fever. The valuation was completed carrying out a new ETE that demonstrated a pseudoaneurysm at the posterior –coronary sinus region with holodiastolic high flow velocity inside (video 1,2,3,4). The intimal flap was confined to only 1-cm segment of aortic annulus. Normal values of prosthetic valve Doppler parameters were measured and no valve regurgitation or fistulization was evident. Severe impairment left ventricular function was revealed. The patient refused surgery and preferred home treatment and heart failure care. He died six months later.

Conclusion

Periannular extension from an infected prosthetic valve can lead to bacterial seeding and destruction of the arterial wall with formation of a pseudoaneurysm. This complication involved aortic valve endocarditis more commonly than mitral or tricuspid valve endocarditis. The natural history of these lesions is the rupture and the fistulization. Transesophageal echocardiography is an invaluable tool in diagnosis of the complicated valve endocarditis. *Enterobacter* species are important nosocomial pathogens responsible for various infections including rarely endocarditis. The mitral valve was most frequently involved and only a case of *E. cloacae* endocarditis following mitral valve replacement with a porcine heterograft has been related. To our knowledge, there have no reports of pseudoaneurysm at the coronary sinus complicating an *E. aerogenes* late prosthetic endocarditis.

Video 1 :
[Posterior aortic sinus dissection](#)



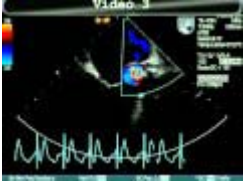
Video 2 :

Pseudoaneurysm of the mitral-aortic intervalvular fibrosa



Video 3 :

Color flow into the false lumen



Video 4 :

Aortic dissection with surgical thread inside

