

Pet Scan and Echocardiography for Diagnosing Infective Prosthetic Valve Endocarditis

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Eighty-one year old patient, male, admitted presenting fever for five days, had history of aortic valve replacement by biological prosthesis six years ago. One year ago, he was subject to percutaneous intervention for insertion of plug for

correction of moderate residual periprosthetic aortic disease, to no success. The transthoracic echocardiography showed a significant left ventricle jeopardy and thickened aortic prosthesis with moderate paravalvar regurgitation to significant (Figures 1 and 2). The transesophageal echocardiography showed uneven thickening with mitral aortic eolucent area (Figure 3), similar to previous tests. The PET scan (after low-glycemic diet) should an area of increase of glucose uptake in the mitral aortic region, compatible with inflammatory/infectious process in aortic ring (Figure 4), showing the significant contribution of this assay for diagnosing infective prosthetic valve endocarditis and its complications¹. Hemoculture was positive for *Streptococcus mitis*, confirming the diagnosis. In spite of the periaortic valve abscess, the patient was treated clinically owing to comorbidities, presenting satisfactory evolution.

Keywords

Echocardiography; Aortic valve/Physiopathology; Endocarditis; Positron Emission tomography.

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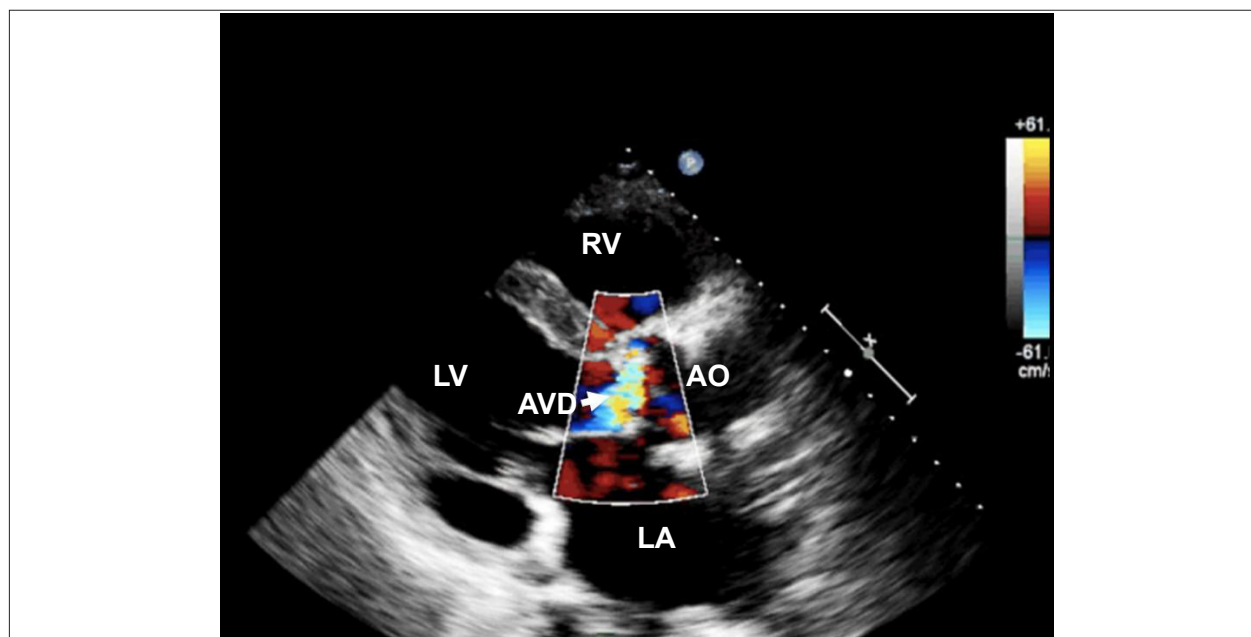


Figure 1 – Transthoracic Echocardiography (longitudinal cross-section) showing the aortic paravalvar disease. RV: Right Ventricle; LV: Left Ventricle; AVD: Aortic Valve Disease; LA: Left Atrium; AO: Ascending Aorta.

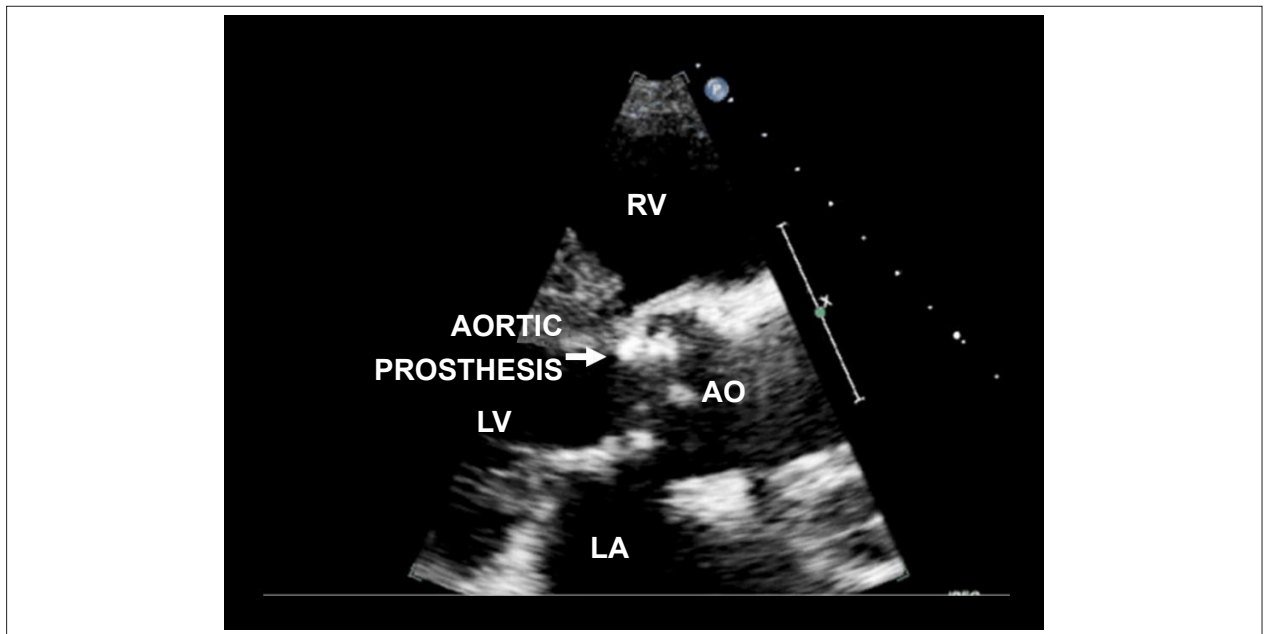


Figure 2 – Transthoracic Echocardiography (longitudinal cross-section) showing the aortic prosthesis, a thickening of the mitral aortic region may be noted. RV: Right Ventricle; LV: Left ventricle; LA: Left Atrium; AO: Ascending Aorta.

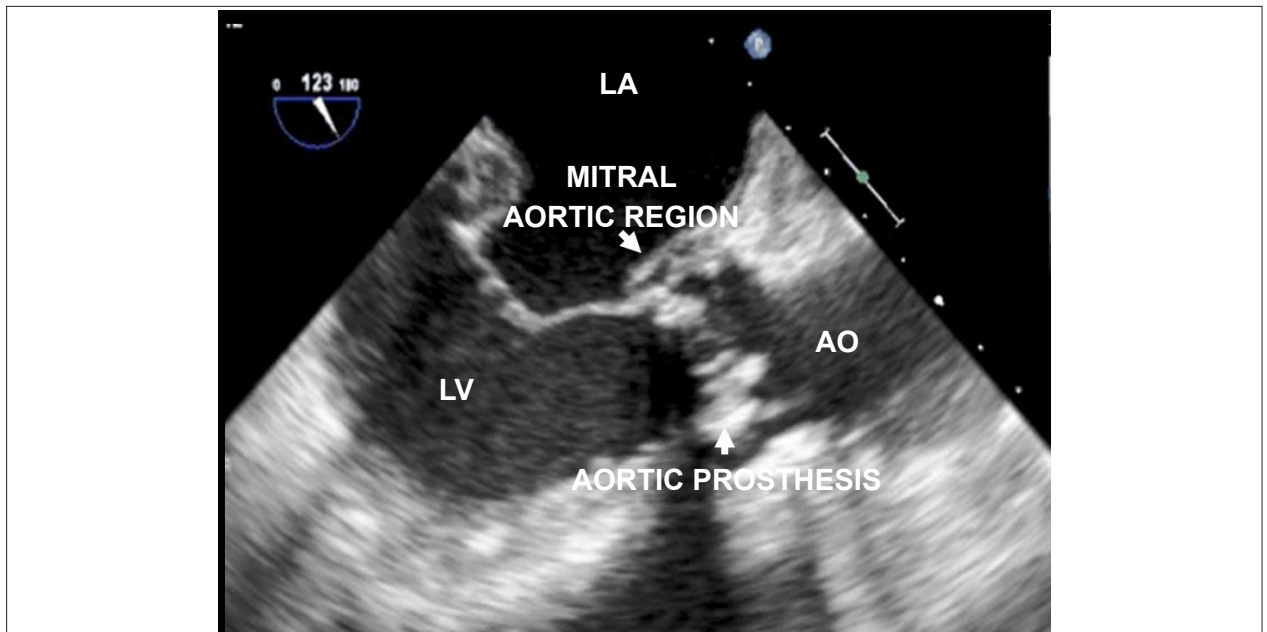


Figure 3 – Transesophageal echocardiography showing thickening of the mitral aortic region. LV: Left ventricle; LA: Left Atrium; AO: Ascending Aorta.

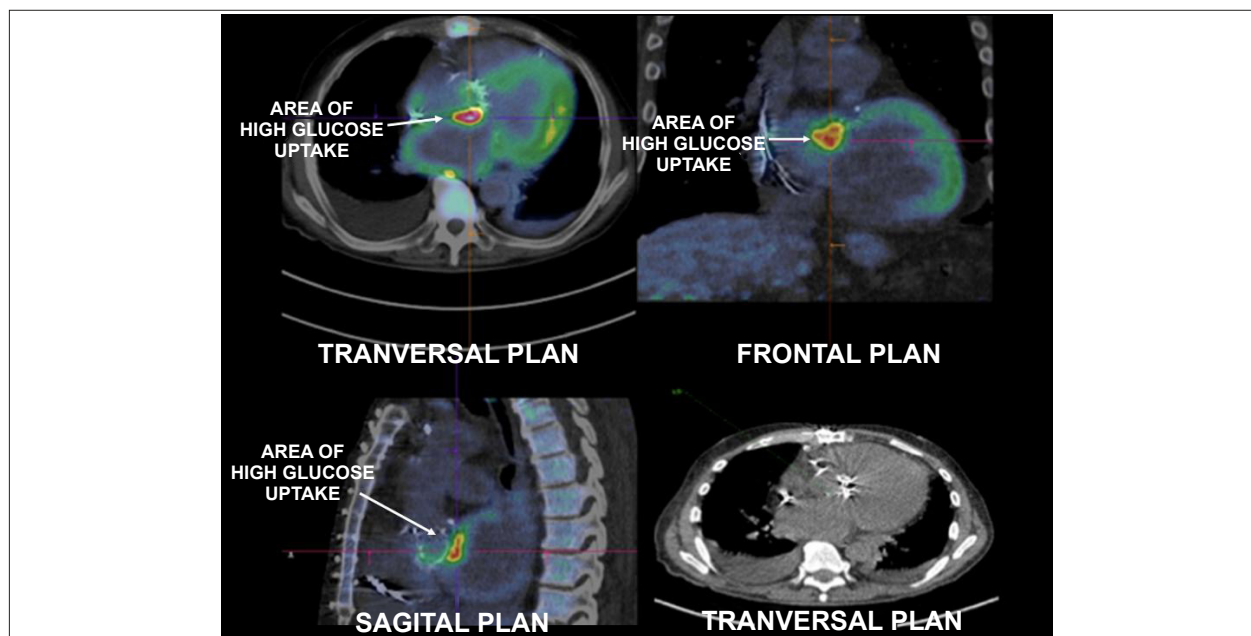


Figure 4 – Pet Scan in transversal, frontal and sagittal planes showing an area of high glucose uptake (arrows showing mosaic in yellow and red).

Reference

1. Saby L, Laas O, Habib G, Cammilleri S, Mancini J, Tessonnur L, et al. Positron emission tomography/computed tomography for diagnosis of prosthetic valve endocarditis: increased valvular 18F-fluorodeoxyglucose uptake as a novel major criterion. *J Am Coll Cardiol*. 2013;61(23):2374-82.