Prosthetic Aortic Valved Conduit Dehiscence with Giant Pseudoaneurysm after Infective Endocarditis

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We present a 65-year-old man with severe longstanding hypertension and aortic valve, aortic root and ascending aorta replacement (Bentall-Bono procedure) secondary to acute type-A aortic dissection with severe aortic regurgitation one year before admission. The patient presented febrile syndrome and dyspnoea for the past ten days; without related procedures that could have had any connection to bacteremia. The physical exam showed severe systolic and diastolic murmur, bilateral crackling rales and peripheral edemas. Chest-X-ray showed acute lung edema. All blood cultures were positive for *Staphylococcus aureus* methicillin-sensitive.

Emergency transesophageal echocardiogram revealed dilated left ventricle, dehiscence of the aortic valve conduit with a giant pseudoaneurysm in the ascending aorta wrapping the conduit (Figure 1A and B, white arrow; p=pseudoaneurysm) with turbulent flow, coming from the left ventricle outflow tract to the pseudoaneurysm (Figure 1D and E, white arrows, p=pseudoaneurysm). During systole, valve conduit was pushed by the systolic pressure and produced a vertical movement of the prosthetic valve ("rocking valve" image) with complete folding of the conduit (Figure 1E, blue arrows). Moreover, a periannular vegetation could be found (Figure 1A, B, C and D, red arrows). The patient died before an urgent surgical procedure, three hours after admission.

In conclusion, we present a case of infective endocarditis over the aortic ring and the aortic valve conduit, with a giant contained pseudoaneurysm, dehiscence of aortic valve conduit, periannular vegetation and a remarkable vertical movement of the valve with aortic conduit crease during systole. Early infective endocarditis on prosthetic aortic valved conduit is a very serious disease with high mortality.

Keywords

Echocardiography; Transesophageal; Hypertension; Surgical Wound Dehiscence; Fever; Endocarditis.

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Manuscript received on July 20, 2014; revised on August 06, 2014; accepted on August 08, 2014.

Authors' Contribution

Research creation and design: Laguna G, AH D'Ovidio, Ferreyra F, Di Stefano S, San Román A ; Data sourcing: AH D'Ovidio, Ferreyra F; Manuscript drafting: Laguna G, Di Stefano S, San Román A ; Critical review of the manuscript as to important intellectual content: Laguna G, AH D'Ovidio, Ferreyra F, Di Stefano S, San Román A.

Potential Conflict of Interests

O declare there are no relevant conflicts of interests.

Funding Sources

This study had no external funding sources.

Academic Association

This is study is not associated to any graduate programs.

DOI: 10.5935/2318-8219.20140039

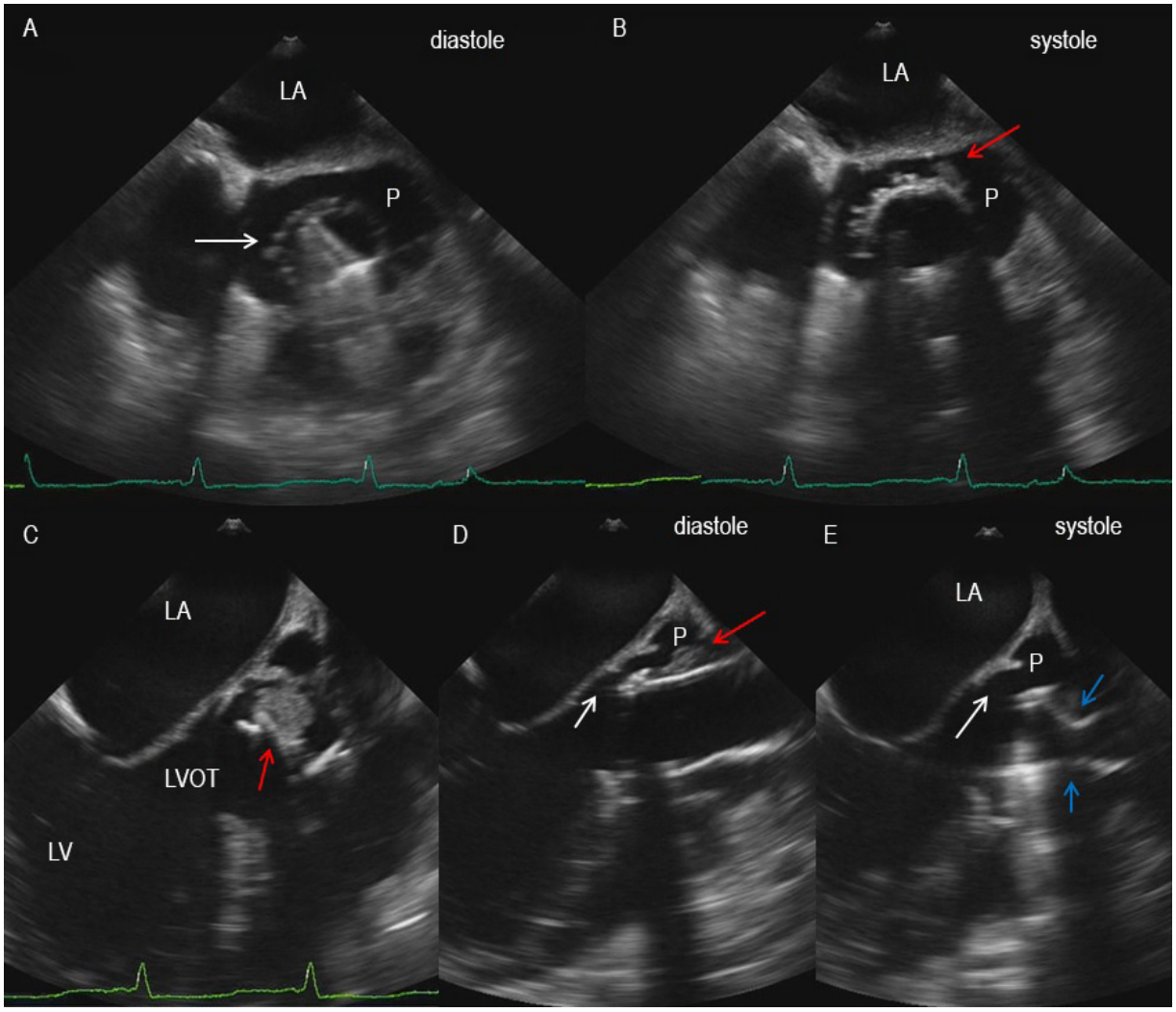

Figure 1 – *Transesophageal echocardiogram. Panel A: Dehiscence of the aortic valve conduit with a giant pseudoaneurysm in the ascending aorta wrapping the conduit (white arrow). Panel B and C: Aortic periannular vegetation (red arrows). Panel D (diastole) and E (systole): During systole, valve conduit was pushed by the systolic pressure and it produced a vertical movement of the prosthetic valve ("rocking valve" image) with complete folding of the conduit (blue arrows). P: pseudoaneurysm; LVOT: left ventricular outflow tract; LA: left atrium; LV: left ventricle.*