EVALUATION OF MECHANICAL AORTIC VALVE ENDOCARDITIS AND FISTULA FORMATION BY CARDIAC COMPUTED TOMOGRAPHY

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This image is from a 57-year-old man with 6 year history of Stanford type A aortic dissection status post aortic valve replacement with a 25 mm St. Jude bileaflet prosthetic aortic valve (PAV) who presented with syncope. Blood culture grew *Staphylococcus lugdunensis*. Transthoracic echocardiography Doppler showed severe PAV obstruction. Transesophageal echocardiography revealed vegetation at the PAV and tricuspid valve (TV) (Figure A, striped arrow and white arrow respectively) and a flow from left ventricular outflow tract (LVOT) to the right-sided chamber (arrow in Figure B). Multidetector computed tomography demonstrated vegetation at PAV (arrows in Figure C) with normal leaflet motion and stable aortic dissection as well as presence of contrast from LVOT into RV only in systole, raising a suspicion of fistula (Figure D = systole and Figure E = diastole, arrow indicates leakage of contrast). The patient subsequently underwent a surgery which confirmed vegetation at PAV and TV with a fistula between LVOT and RV at the base of the TV (arrow in Figure F). Fistula was closed, a redo-PAV surgery with a 25 mm Medtronic Mosaic valve and a TV repair were performed.

LA: left atrium; MV: mitral valve; LV: left ventricle; RA: right atrium; RV: right ventricle; AoD: aortic dissection; LVOT: left ventricular outflow tract; RC: right-sided chamber; PAV: prosthetic aortic valve; asterisk: Swan-Ganz catheter.