Percutaneous VDD Leadless Pacer Implant After Recent Bioprosthetic Tricuspid Valve Replacement for Infective Endocarditis

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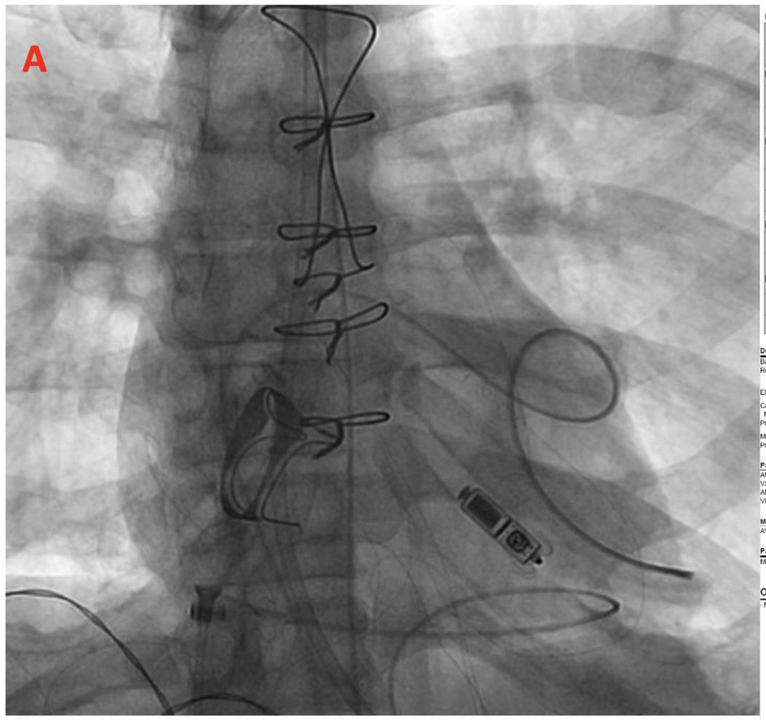
Background

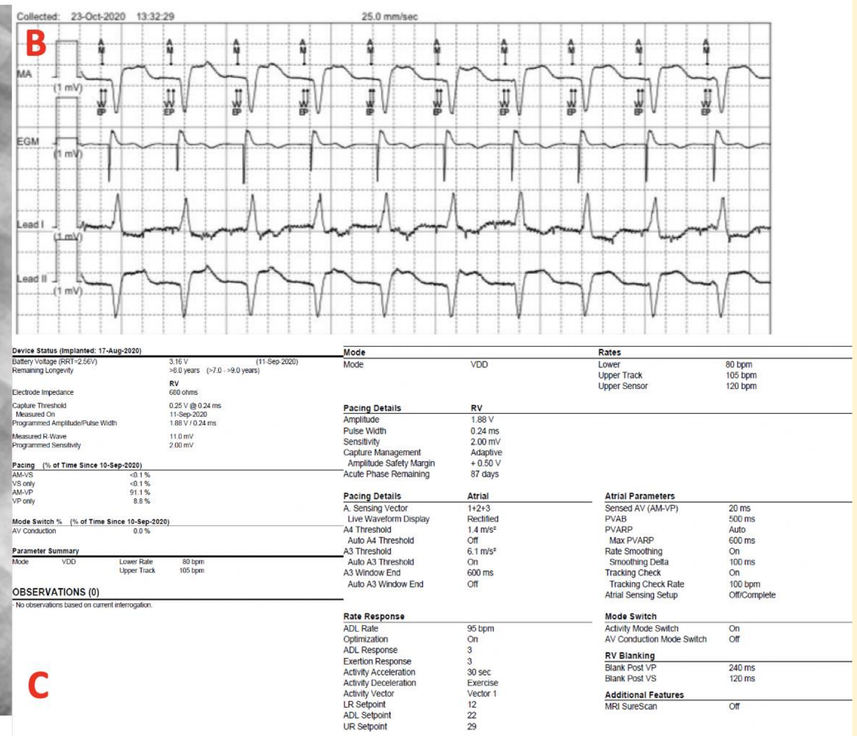
- There is limited data regarding VDD leadless pacemaker implant safety and outcomes in patients following bioprosthetic tricuspid valve replacement

Case

- 44 year old male with pmh of IV drug use and hepatitis was admitted after being found unconscious.
- Labs significant for WBC to 25,000 mm3 with blood cultures growing methicillin sensitive Staphlococcus Auerus and echocardiogram demonstrated tricuspid vegetation with moderate regurgitation
- Underwent replacement with a bioprosthetic valve and post-operative course was complicated by respiratory failure requiring intubation and renal failure
- He developed asystole and junctional bradycardia requiring continuous pacing. Subsequently atrial flutter with complete heart block followed by recovered sinus rhythm and various degrees of advanced heart block.
- VDD leadless pacemaker was placed on post-operative day 30
- Hospital course complicated by two aortic pseudoaneurysm ruptures with successful repairs.
- At 1 month follow up, had stable device thresholds, sensing and impedance

Imaging





A) Fluoroscopic AP view of VDD leadless pacemaker in right ventricle, through the bioprosthetic valve. B) EGM demonstrating AV synchrony. C) 1 month follow up interrogation demonstrating normal functioning device.

Discussion

- To our knowledge this is the first VDD leadless pacemaker placement following bioprosthetic tricuspid valve replacement.
- It was an uncomplicated procedure with expected results. We have no evidence that the pseudoaneurysm ruptures were related to the pacemaker placement.
- No consensus guidelines on the use of leadless pacemaker in the setting of endocarditis or those with increased infection risk
- Based on our experience the use of VDD leadless pacemaker for treating advanced atrioventricular conduction disorders should considered safe in the setting of recent surgical tricuspid valve replacement and elevated risk of infection

Disclosures: The mentioned authors have no relations to disclose.