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FIT Clinical Decision Making

WHAT CAME FIRST, THE CHICKEN OR THE EGG? HIGH DEGREE AV BLOCK AND TAKOTSUBO'S CARDIOMYOPATHY

Poster Contributions

Hall C

Saturday, March 29, 2014, 3:45 p.m.-4:30 p.m.

Session Title: FIT Clinical Decision Making: Congenital and Electrophysiology

Abstract Category: Arrhythmias and Clinical EP

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Introduction: Takostubo's cardiomyopathy is a transient left ventricular(LV) dysfunction that usually follows an acute stressful event like an acute medical illness or other forms of emotional or physical stress. There are few case reports of this cardiomyopathy associated with high degree AV block reported in the literature. LV dysfunction usually normalizes within 2 to 12 weeks in most cases. But it is not well known if AV block in the setting of Takostubo's cardiomyopathy recovers.

Case Report: A 65 Yo female presented to the hospital for an elective wrist ganglion cyst removal and pre op vital check showed bradycardia in the low 40's. Patient was complaining of dizziness and indigestion and sent to the ED. EKG showed 2:1 AV block with a LBBB. Her lab work was unremarkable except for small elevation of troponins.

Decision Making: Echocardiography showed a wall motion abnormality consistent with LAD territory ischemia with an LVEF of 35%. Coronary angiography showed no significant occlusive CAD and LV gram was consistent with Takostubo's Cardiomyopathy. Electrophysiologic(EP) study showed spontaneous infra-Hisian block with prolonged HV interval, at which time the patient was implanted with a Biventricular(BiV) pacemaker. The decision to implant the BiV is made due to the fact that RV pacing may worsen the underlying left ventricular dysfunction. Patient was discharged home on standard heart failure regimen. At three months follow up her LVEF had normalized and she was 100% BiV paced and the AV conduction had not normalized.

Conclusion and Teaching points: This case demonstrates the possible link between AV block and Takostubo's cardiomyopathy and the management dilemma it poses. Although the LV dysfunction recovers in almost all patients with this cardiomyopathy, it is not well known whether AV conduction normalizes with time. It is hard to know whether the AV block is the cause or the result of the stress induced cardiomyopathy. These patients are usually treated with BiV permanent pacemaker to avoid worsening of cardiomyopathy from RV pacing. Long term follow up is necessary to check for resumption of 1:1 AV conduction and hence avoid unnecessary pacing.