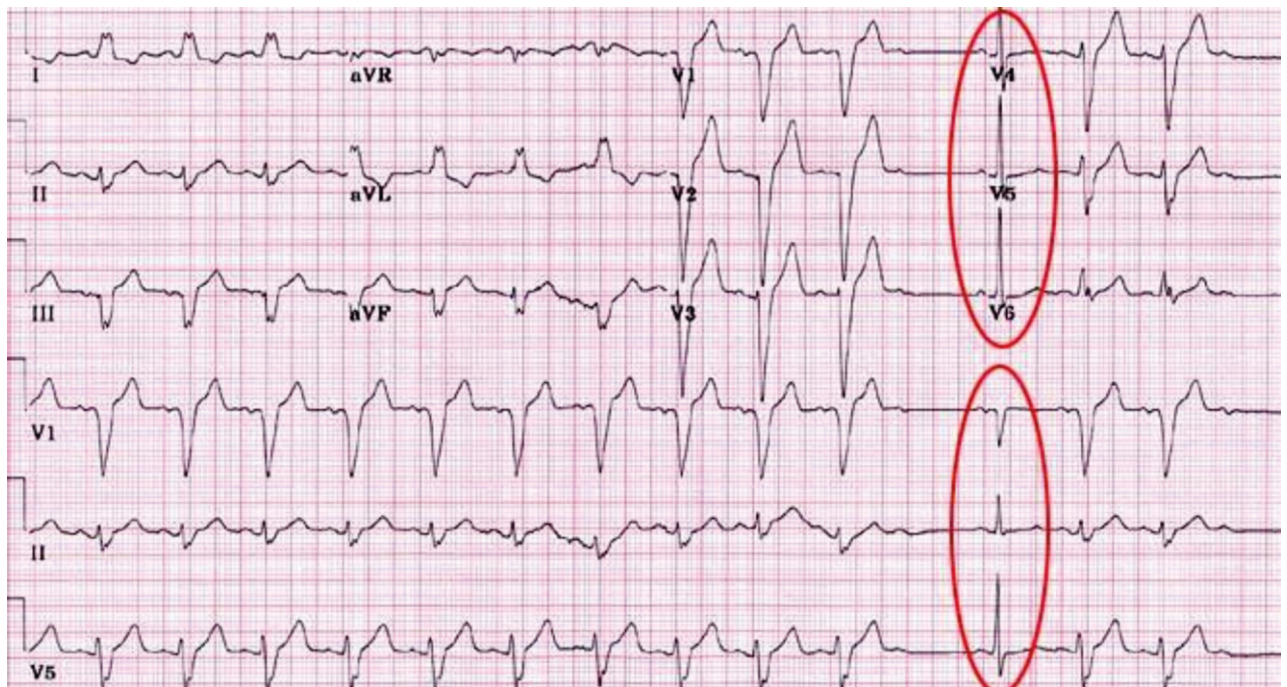


Pictorial CME

Arrhythmia Graphics - An interesting ECG

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This is an ECG of a 60 years old male patient presented with symptoms of dyspnea on exertion (NYHA CI III), also had orthopnea, palpitations and dizziness since few months. Echocardiogram revealed Dilated Cardiomyopathy and LV DYSFUNCTION (EF was 30%).

The ECG is showing broad QRS, LBBB type of intraventricular conduction defect with second degree AV block. The 11th beat, which is coming after the pause, is conducted normally and has normal QRS. The interesting part is a NORMAL SINUS BEAT WITH NARROW QRS embedded in tachycardia with LBBB and AV Block. The possible explanation for this is that 'after non-conducted P

wave, there is restitution of transmembrane action potential of the conduction system which was initially showing aberrancy (LBBB). After the non-conducted P wave, it is likely that calcium influx occurred to its fullest extent and this probably helped in generation of narrow QRS. Patient was advised permanent pacemaker implantation or CRT.

References:

1. <http://www.metealpaslan.com/ecg/aberasyon2en.htm>
2. Anthony A. Fossa, Meijian Zhou, "Assessing QT prolongation and electrocardiography restitution using a beat-to-beat method"; Cardiology Journal 2010, Vol. 17, No. 3, pp. 230–243

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