

Distinguishing between Brugada and incomplete right bundle branch block on ECG

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26 year-old white male presented for syncope and fall from a ladder. He had been working in the hot sun without fluid intake. He had a history of bipolar disorder, was not on medications, and admitted to alcohol and marijuana use. He had no family history of sudden death. Physical exam showed normal vital signs, normal cardiac exam, and a 5 cm right posterior scalp laceration, which was stapled closed. ECG revealed an incomplete right bundle branch block (IRBBB) with Brugada pattern (Image 1). Trauma imaging and labs were negative for acute findings. He was admitted for syncope and closed head injury. A Cardiology consult concurred with the IRBBB with Brugada type 2 pattern. He underwent an antiarrhythmic drug challenge with procainamide that showed no arrhythmias and no evidence of right precordial J-point or ST-segment elevation, therefore negative for Brugada pattern/phenotype. It was concluded that he had IRBBB variant.

Keywords: Brugada; Sudden cardiac death; Incomplete right bundle branch block; Syncope

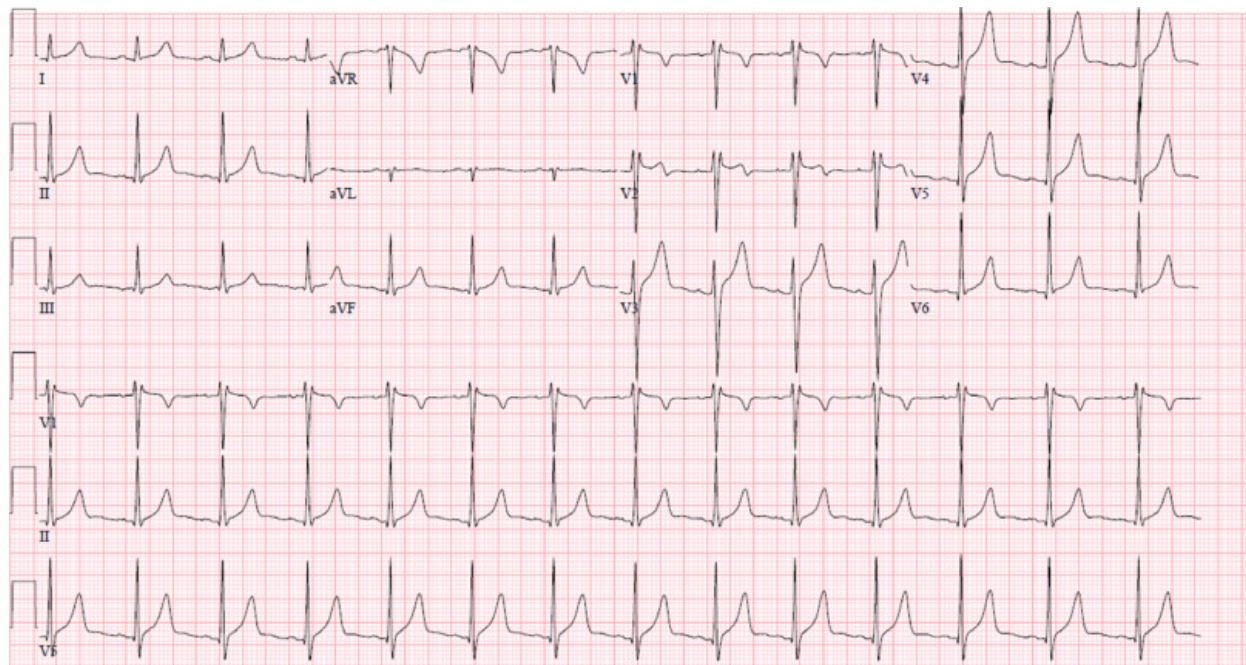


Image 1

ECG demonstrating incomplete right bundle branch block (QRS 96 ms with rsr') and Brugada pattern type 2 in V1, V2 defined as J-wave amplitude ≥ 2 mm, T wave biphasic or positive, ST-T saddle-back configuration, and ST segment terminal portion elevated ≥ 1 mm.

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