Report Article

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Unexplained Syncope: A not so Uncommon Mystery

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Abstract

Unexplained collapse can be difficult to decipher. A 67-year-old male presented with recurrent syncope, coronary angiogram illustrated coronary artery disease. Syncope continued post percutaneous coronary intervention.

Keywords: Syncope; ECG; Atrioventricular Block; Percutaneous Coronary Intervention; Permanent Pacemaker; Kenya.

Background

Syncope is defined as transient loss of consciousness (TLOC) due to cerebral hypoperfusion, characterized by a rapid onset, short duration, and spontaneous complete recovery. The pathophysiological classification centres on a fall in systemic blood pressure (BP) with a decrease in global cerebral blood flow as the defining characteristic of syncope [1].

Case Presentation

Sixty Seven-year-old malewith diabetes and hypertension was brought in to the emergency department by paramedics after losing consciousness. The episode was witnessed by his son, who notedthat he was unresponsive and had jerky movements that lasted 1 minute, accompanied by confusion and headache on regaining consciousness. Vital signs at home were significant for a heart rate of 22bpm, administered 0.6mg of atropine with resultant heart rate of 90bpm.

He had a history ofthree prior episodes of loss of consciousness during the year 2017. He was diagnosed with ischemic heart disease and percutaneous coronary intervention with a drug eluting stent was performed.

Physical examinationwas normal. Laboratory evaluation was significant for elevated white cell count of 13,200 cells per microliter with neutrophilia of 91.7%, kidney function with elevated potassium of 5.9mmol/l and normal troponin.

He was started on an antibiotic andresonium.MRI of the brain and EEG was normal.ECG showed features of first degree heart block, right axis deviation and right bundle branch block. A 24-hour-holter monitor showed frequent 2 second pauses.

A diagnosis of paroxysmal AV block wasmade, and a dual chamber pacemakerimplanted. The anti-epileptic medication was stopped, and angiotensin receptor blockerdose was decreased by half.

Discussion

In medicine we often face diagnostic dilemmas. This gentleman had significant risk factors for coronary artery disease, presented with syncope and had been treated as an NSTEMI with a PCI a year earlier. A witnessed account of the collapse pointed towards a neurological cause. His Hba1c was low, indicating tight glycaemic control with the possibility of hypoglycaemic events.

Fortunately, during this episode, the paramedic team documented and treated an arrhythmia that

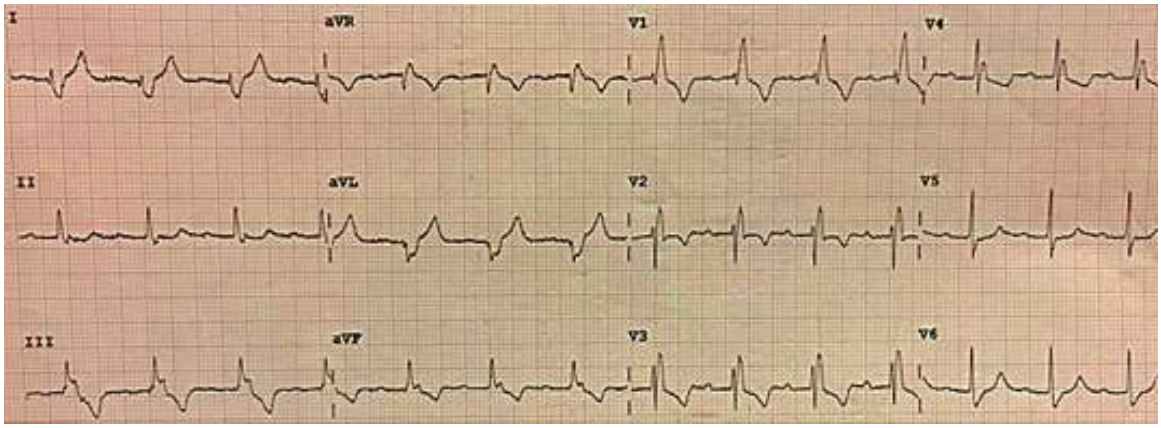

Fig. 1: ECG on presentation, first degree heart block, right bundle branch block, right axis deviation.

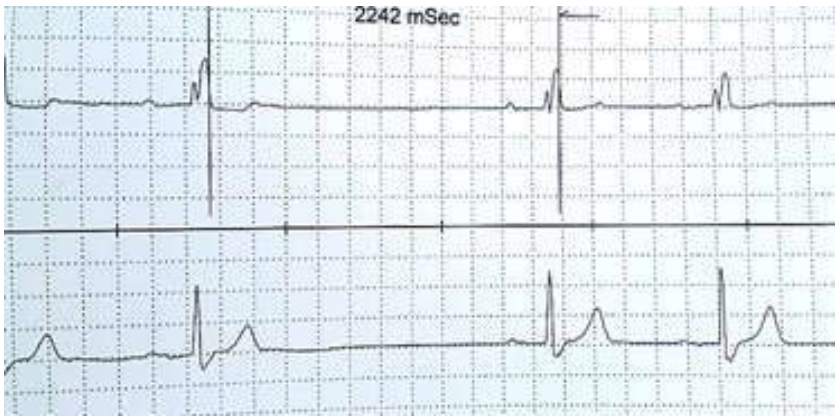

Fig. 2: Holter showing 2 second block

was confirmed on Holter monitoring. The arrhythmia was in the setting of an elevated potassium. Furthermore, he had a trifasicular block which predisposes to a complete heart block

Conclusion

Cardiac syncope should be considered in the presence of structural heart disease or coronary artery disease. ECG findings suggesting arrhythmic syncope include, Bifascicular block (defined as either left or right BBB combined with left anterior or left posterior fascicular block) [1].

Idiopathic paroxysmal complete AV block usually occurs with one or multiple consecutive pauses, without P-P cycle lengthening or PR interval prolongation, not triggered by atrial or ventricular premature beats nor by rate variations. Patients have a long history of recurrent syncope without prodromes [2]. Absence of progression to persistent forms of AV block, and efficacy of cardiac pacing therapy [3].

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