

## Vasovagal Syncope Mimic Epileptic Seizure

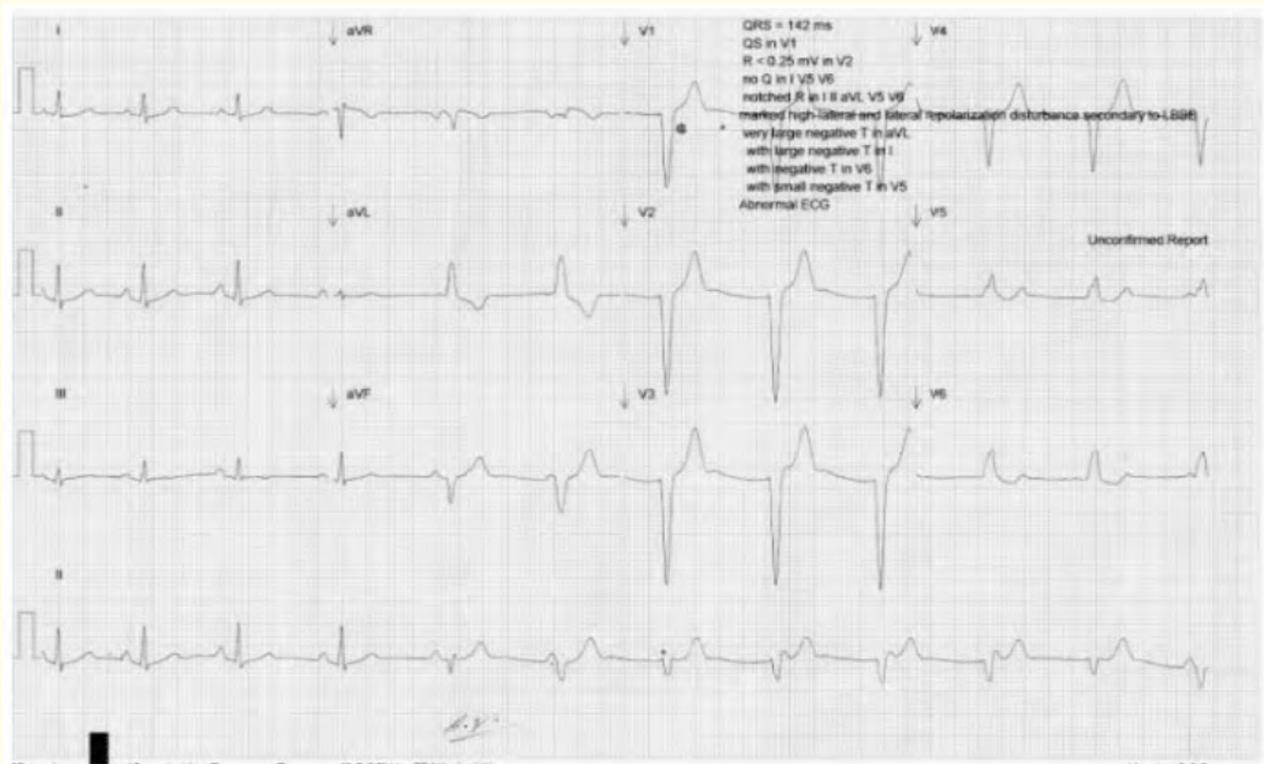
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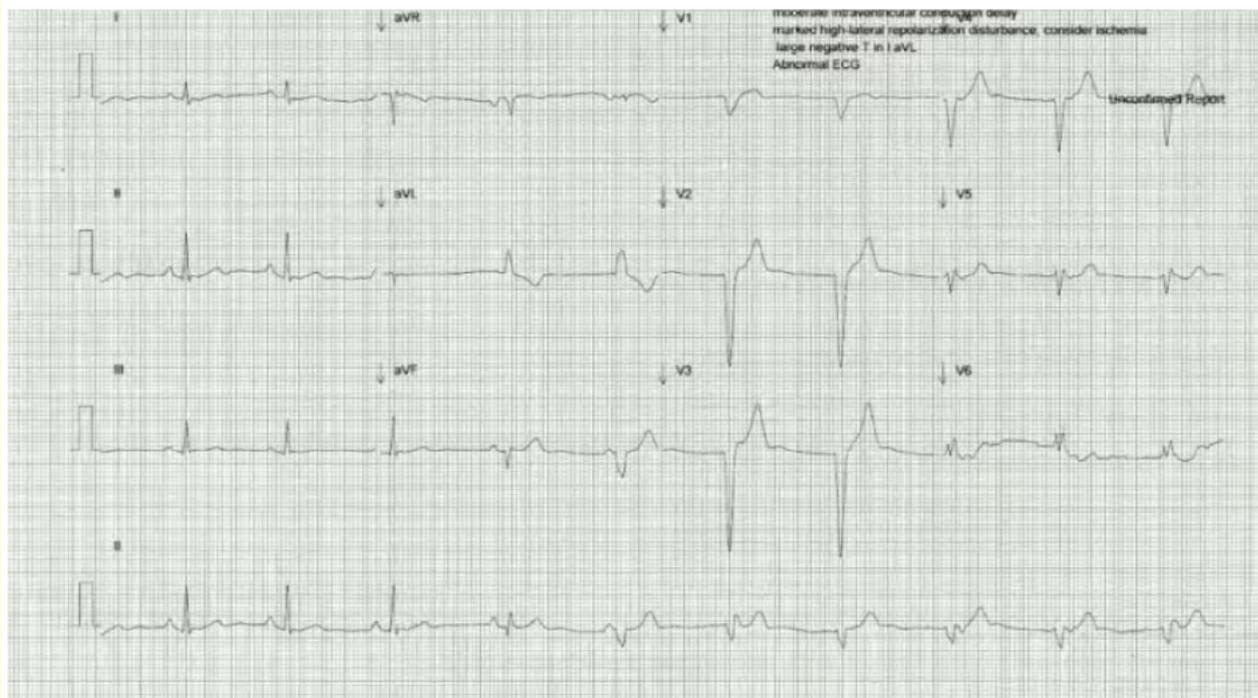
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Received: November 10, 2018; Published: January 17, 2019

Syncope and/or medically refractory seizure is not the common sign or symptom for hypothyroidism. "Fainting spell" has some relation with hypothyroidism although is not clear whether hypothyroidism is the cause or it is related with syncope/seizure. Atrial fibrillation which can cause light headedness or fainting. Hypothyroidism complaints with fainting spell needs to investigate further for coexisting medical conditions such as involvement of hematological, neurological and cardiological reference. It is also important to under control ones hypothyroidism dietary supplements such as use of magnesium in daily life, which may help both heart issues and other symptoms of hypothyroidism. There have been many cases reported which are misdiagnosed with vasovagal syncope with seizure. There is differentiation between syncope and seizure, although it is sometimes problematic. In some case syncope may mimics epileptic seizure in many way. The present report describes a patients who had been hypothyroid for 10 years developed syncope during sleep. She was put on thyroid supplement 100 microgram ones daily after then she went to her doctor to adjust her thyroxine dose. She came to doctor with the complaint of syncope for 6 years and she had syncope during sleep. Her husband witness of her complaint of having tonic colonic convulsion and postictal confusion. Her doctor sent her to neuro-expert, she was then suggested to give lumark 250 mg ones daily. She was sent to hospital for a severe headache at L occipital area, gripping in nature but after having syncope during sleep. Denies photophobia, neck stiffness/fever. Systems review says no chest pain/SOB palpitation, no bowel motion changes, and no dysuria. With no family history of HTN and T2DM, hyperlipidemia. She was initially admitted under the care of neuro team and subsequently transfer of care of cardiology, EEG was normal CT brain was done shown normal study. There is no established infarct or acute intracranial hemorrhage seen. No mass effect or hydrocephalus is demonstrated. She was referred to cardiology team as her ECG showed intermittent AV dissociation with LBBB pattern (Figure 1a and 1b).



**Figure 1a:** ECG showing of sequences of ventricular complexes marked left axis deviation with the heart rate 66. (Adopted from Khan S, Kaneez FS. Thyroid Hormone Disturbance and Atrioventricular Block: Correlation with Cardiogenic Syncope in Young Adult. *EC Cardiology*. 2017;2:268-71).



**Figure 1b:** ECG showing of sequences of multiform premature ventricular complexes marked left axis deviation with the heart rate 61 BPM. (Adopted from Khan S, Kaneez FS. Thyroid Hormone Disturbance and Atrioventricular Block: Correlation with Cardiogenic Syncope in Young Adult. *EC Cardiology*. 2017;2:268-71).

Cardiac enzymes were normal. Electrolytes, including calcium/magnesium/phosphate were normal. Her echocardiogram report shows IVS/AVS are intact. She was moved to cardiac care unit for further monitoring. She was put on holter which showed intermittent AV dissociation, min hour 43 Max HR 135, No sig pause (1.99 sec), subsequently she was put on continuous monitoring. Telemetry which again showed intermittent AV dissociation. However, her cardiac MRI shows normal study. Before she was discharged Neuro team reviewed once more as a differential to her's presentation is an underlying epileptic disorder. Neuro-team unconvinced that it is a seizure disorder. This case pointed out to mark the differentiation between vasovagal syncope to epileptic seizure is critically important to reach for the accurate treatment of suffering patient. It is also take into consideration of evaluating vasovagal syncope with epileptic seizure. In such cases taking detail family history, patient with severe bradycardia or hypotension in hypothyroidism. Vitamin D deficiency as the common denominator and Anemia associated with some cases of hypothyroidism. In some cases dietary insufficiency is considerably important such as in our presenting case she was supplemented with magnesium rich diet (food sources include leafy greens, whole grains, nuts and seeds, and dark chocolate) and she is seem to be fine and symptom free since she has been using magnesium rich diet. (<https://treato.com/Magnesium,Neurocardiogenic>) In such circumstance this case report may be helpful to endocrinologists to consider the complete patient history. This case highlights the important points in management of hypothyroid patients when they come with the complaint of having syncope/seizure.

**Volume 6 Issue 2 February 2019**

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