NIGERIAN CARDIAC SOCIETY (NCS)

55th Annual General Meeting & Scientific Conference (NCS EKO 2026)

September 22–24, 2026 • Eko Hotel Convention Centre, Lagos, Nigeria

AC075

Adult Cardiology & Clinical Cardiovascular Medicine • Poster Presentation

POSTURAL ORTHOSTATIC TACHYCARDIA SYNDROME AS A CLOSE DIFFERENTIAL DIAGNOSIS IN A PATIENT PREVIOUSLY LABELED AS BRUGADA SYNDROME: A CASE REPORT

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Stand: POSTER #AC075 | **Venue:** Poster Exhibition Hall & Gallery - Eko Convention Centre |**Online Ref:** https://nigeriancardiacsociety.com/abstracts/AC075

Background: Brugada syndrome is an inherited cardiac channelopathy associated with ventricular arrhythmias and sudden cardiac death, requiring a spontaneous or provoked Type 1 ECG pattern for diagnosis. However, symptoms such as palpitations and syncope are nonspecific and may overlap with autonomic disorders, including Postural Orthostatic Tachycardia Syndrome (POTS). POTS is characterized by excessive orthostatic sinus tachycardia and symptoms of orthostatic intolerance without significant hypotension. Distinguishing autonomic-mediated syncope from arrhythmogenic causes is essential to avoid misdiagnosis and inappropriate management.

Methodology: We reviewed the clinical history, electrocardiographic data, and implantable loop recorder (ILR) findings of a patient previously labelled with Brugada syndrome. Particular attention was given to the presence or absence of diagnostic ECG features, the context of syncopal events, and rhythm documentation during symptoms. Differential diagnoses were explored, including autonomic dysfunction, reflex syncope, inappropriate sinus tachycardia, and Brugada phenocopy.

Results: The patient had no documented spontaneous or drug-induced Type 1 Brugada ECG pattern. A syncopal episode occurred during ambulation and was preceded by palpitations. ILR interrogation demonstrated isolated sinus tachycardia without ventricular arrhythmia, bradyarrhythmia, or conduction block. The exertional nature of symptoms, negative family history, and absence of malignant arrhythmia argued against highrisk Brugada syndrome. These findings raised strong suspicion for POTS or related autonomic disorders.

Conclusion: This case illustrates the importance of reconsidering Brugada syndrome diagnoses when objective electrocardiographic criteria are lacking. In patients presenting with uprighttriggered syncope, palpitations, and ILRdocumented sinus tachycardia without ventricular arrhythmia, autonomic disorders such as POTS should be strongly considered. Careful reassessment can prevent misdiagnosis, reduce unnecessary interventions, and guide appropriate management.

Keywords: Brugada syndrome, POTS, syncope, Implantable loop recorder