

Isolated Cardiac Sarcoidosis Manifesting with Ventricular Tachycardia, Systolic Heart Failure, and Pre-Excitation Accessory Pathway

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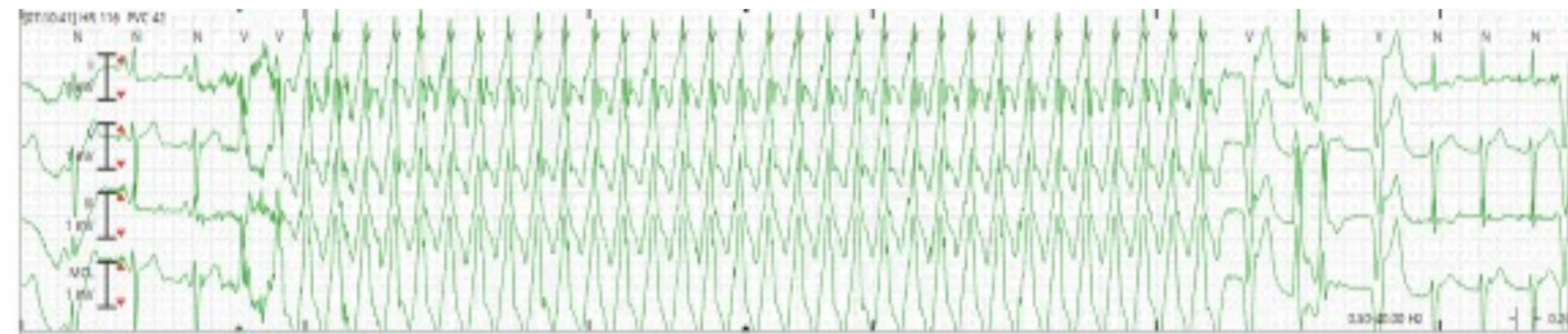
Purpose

- Cardiac sarcoidosis (CS) accounts for significant morbidity and mortality and typically involves multiple organs¹
- It is suggested that patients with ICS have worse outcomes due to delayed diagnosis²

Case

- 43 y/o AA M with PMHx of tobacco abuse presents with multiple episodes of presyncope
- Echocardiogram showed biventricular systolic dysfunction
- No evidence of obstructive coronary disease on coronary angiogram
- cMR showed significant delayed enhancement and edema in the inferior and sub-epicardial and mid-myocardial wall segments
- PET significant cardiac uptake and no pathologic systemic uptake, consistent with isolated cardiac sarcoidosis
- Ambulatory cardiac monitor showed multiple runs of narrow complex tachycardia with evidence of pre-excitation that was not seen previously
- Accessory pathway was later confirmed on EP study and successfully ablated, and the patient received an implantable cardioverter defibrillator (ICD)

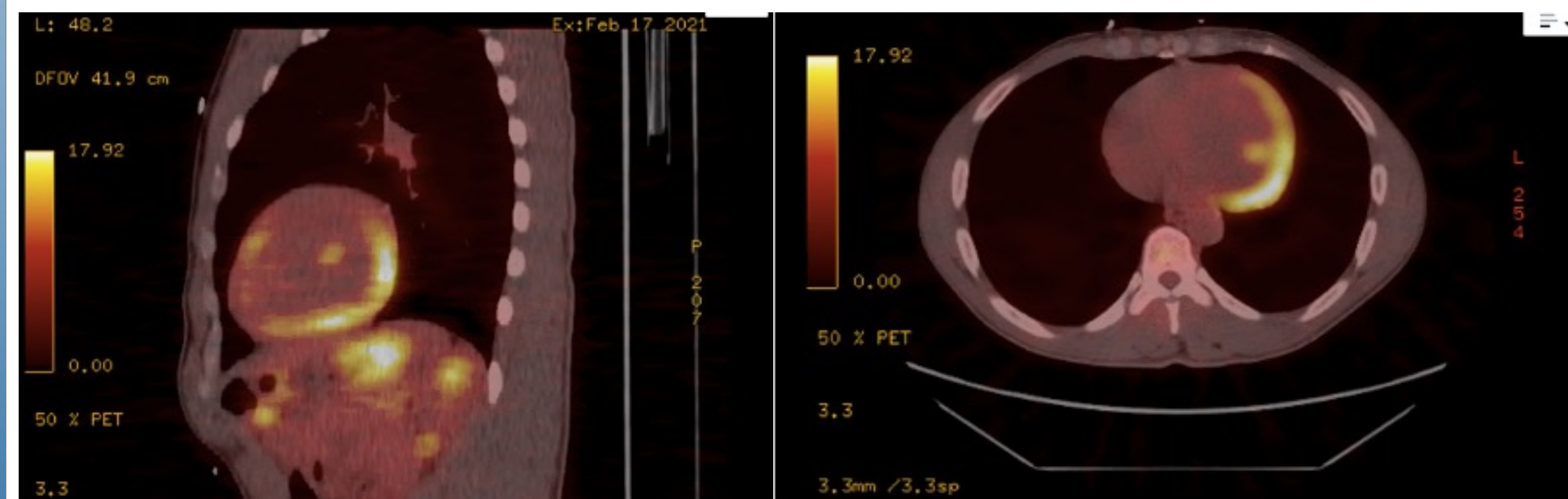
Case



Telemetry with non-sustained monomorphic ventricular tachycardia



Presenting ECG revealed junctional narrow QRS rhythm, inferolateral T-wave inversions, and PVCs
New accessory pathway manifested 2 months after presenting in Wolff-Parkinson-White pattern



PET scan was markedly positive for FDG uptake in the basal mid inferior/ inferolateral walls extending towards the apex consistent with active CS

Discussion

- Confirming the diagnosis of CS/ iCS is challenging given the lack of sensitivity of the gold standard endomyocardial biopsy^{1,2}
- A combination of noninvasive imaging including cMR and PET are needed^{1,2}
- Accessory pathways can become clinically evident in patients with CS, possibly due to involvement of AV node and His-Purkinje system.^{3,4}

Conclusion

- Isolated cardiac sarcoidosis is an elusive diagnosis that requires high level of suspicion and multimodal imaging techniques to confirm the diagnosis.
- Further studies are needed to develop and validate diagnostic algorithm and management approach for these patients.

References

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