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Case Report

Ventricular tachycardia – An initial unusual presentation of sarcoidosis

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ABSTRACT

A 42-year-old lady with a diagnosis of hyperreactive airway disease since 4 years treated with bronchodilators presented with monomorphic ventricular tachycardia with syncope requiring direct current (DC) cardioversion. Two-dimensional echocardiography with cardiac colour Doppler examination and magnetic resonance imaging (MRI) revealed left ventricular dilatation, systolic dysfunction with patchy areas of thickening and regional wall motion abnormality not specific to any particular vascular territory and advanced diastolic dysfunction.

Review of records revealed persistently raised erythrocyte sedimentation rate which was previously ignored.

Gadolinium contrast cardiac MRI revealed late gadolinium enhancement suggestive of myocarditis. Thoracic MRI revealed a mediastinal lymph node mass. A computed tomography (CT) directed lymph node biopsy confirmed sarcoidosis. She was offered implantable cardioverter-defibrillator device and immunosuppression therapy with prednisolone 1 mg/kg/day.

1. Introduction

Sarcoidosis is a disease involving abnormal collections of inflammatory cells (granulomas) that can form as nodules in multiple organs. The granulomas are most often located in the lungs or in its associated lymph nodes, but any organ can be affected.

Cardiac sarcoidosis can be a benign, incidentally discovered condition or a life-threatening disorder causing sudden death.

Diagnosis of cardiac sarcoidosis is difficult to establish, especially in patients without evidence of sarcoid in other organs and thus cardiac sarcoidosis is often underdiagnosed in every day clinical practice. Furthermore, there is neither a clear-cut understanding of the underlying pathophysiology and progression of this disease, nor a consensus on the optimal methods for disease detection, monitoring, and treatment.

A recent review of sarcoidosis placed cardiac involvement at 2%.[1] Autopsy of the patients suffering from sarcoidosis has shown the incidence of cardiac sarcoidosis to be 20–25%.[2]

2. Case report

A 42-year-old married lady presented with sudden onset loss of consciousness with hypotension. The 12 lead electrocardiogram on admission to the emergency department revealed monomorphic ventricular tachycardia (Fig. 1). She was treated with a single 200 J direct current cardioversion which restored sinus rhythm. The patient had recurrent episodes of sustained monomorphic ventricular tachycardia and ventricular fibrillation in the critical care unit. The chest radiograph was normal.

Treatment included DC cardioversion, elective intubation and ventilation, inotropic support and intravenous amiodarone infusion.

Patient did not have cyanosis, clubbing, oedema, icterus, palpable lymphadenopathy, pallor.

She had a history of dry cough and dyspnoea on exertion MMRC grade 2 since the last 4 years for which she was being treated with bronchodilators at another centre. Serial chest radiographs were normal. Review of medical records revealed persistently elevated erythrocyte sedimentation rate which was probably ignored.

She had presented to another hospital with generalised weakness and breathlessness two weeks ago. The 12 lead electrocardiogram then was suggestive of marginal ST elevation in lead III and AVF with ST-T changes in lateral leads. A diagnosis of acute inferior wall myocardial infarction was made; hence the

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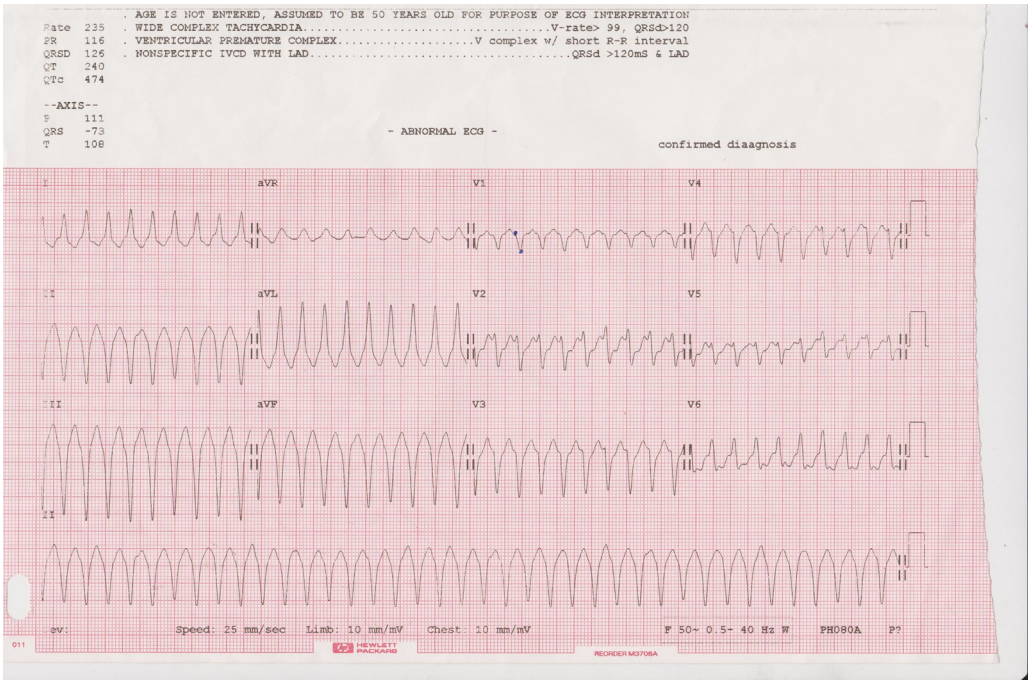

Fig. 1. Electrocardiogram in the emergency department showing monomorphic ventricular tachycardia.

patient was advised coronary angiogram with intention of primary angioplasty. However, the troponin T levels were within normal limits. The coronary angiogram was normal, hence the patient was discharged with a diagnosis of acute coronary syndrome and was advised medical management including dual antiplatelet therapy, beta blocker and angiotensin receptor blocker.

There was no history of chest pain, haemoptysis, fever, history suggestive of rheumatic heart disease or any substance abuse. She had a history of prolonged infertility for which she was advised in vitro fertilisation.

Ventricular tachycardia settled with intravenous amiodarone infusion. However, frequent ventricular premature beats persisted.

Her laboratory investigations revealed normocytic normochromic anaemia with raised erythrocyte sedimentation rate (90 mm at end of first hour). The renal function test, hepatic function test and electrolytes were normal. There was no evidence of elevated cardiac enzymes.

Two-dimensional echocardiography with cardiac colour Doppler examination revealed marginal left ventricular dilatation (E-point septal separation 10.2 mm), systolic dysfunction (left ventricular ejection fraction 40% by area length method in orthogonal projections) with patchy areas of thickening and regional wall motion abnormality not specific to any particular vascular territory and advanced diastolic dysfunction.

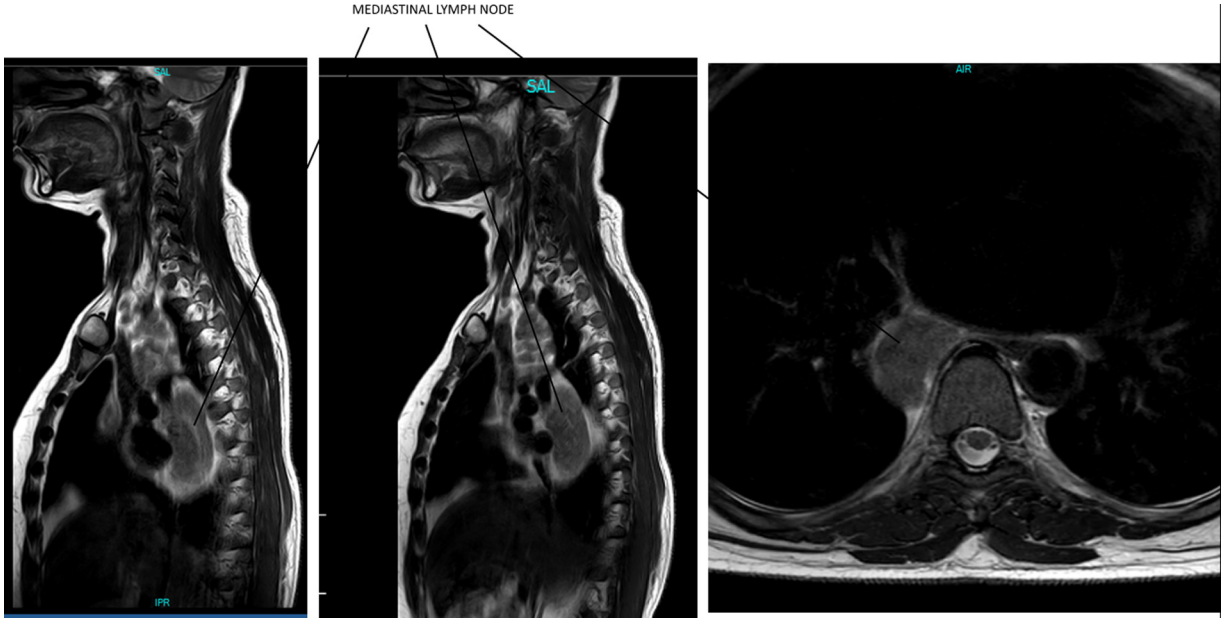

Fig. 2. Thoracic magnetic resonance imaging showing a large mass of lymph nodes occupying the superior and posterior mediastinum.

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