Pleomorphic Ventricular Tachycardia in Structurally Normal Heart

Introduction: Pleomorphism as defined by multiple ventricular tachycardia morphologies is usually associated with either coronary artery disease or structural heart disease. We present an unusual case of pleomorphic VT with differing morphologies.

Methods: Fifty year old gentleman presented with recurrent palpitations. ECG showed fast broad irregular tachycardia with differing morphologies (Figure 1). He had undergone DC cardioversion twice at another hospital. ECG during sinus rhythm did not show pre-excitation, long QT or any other abnormality (Figure 2).

Result: Echocardiography showed normal bi-ventricular structure and function. He was taken up for EP study which showed clear VA dissociation during the tachycardia (Figure 3). Further evaluation coronary angiogram, contrast enhanced CT scan of the chest and cardiac MRI showed no abnormality.

Conclusion: Fast, broad tachycardia is typically seen in patients with coronary heart disease or with underlying structural abnormality. This type of tachycardia is extremely rare in structurally normal heart.