

Giant tumor of the left ventricle presenting with sustained ventricular tachycardia

Olgierd Woźniak¹, Elżbieta K. Biernacka¹, Marek Konka¹, Jacek Wnuk²,
Paweł Bekta³, Dorota Piotrowska-Kownacka⁴, Piotr Hoffman¹

¹ Department of Congenital Heart Diseases, Institute of Cardiology, Warsaw, Poland

² Department of Nuclear Medicine, Institute of Cardiology, Warsaw, Poland

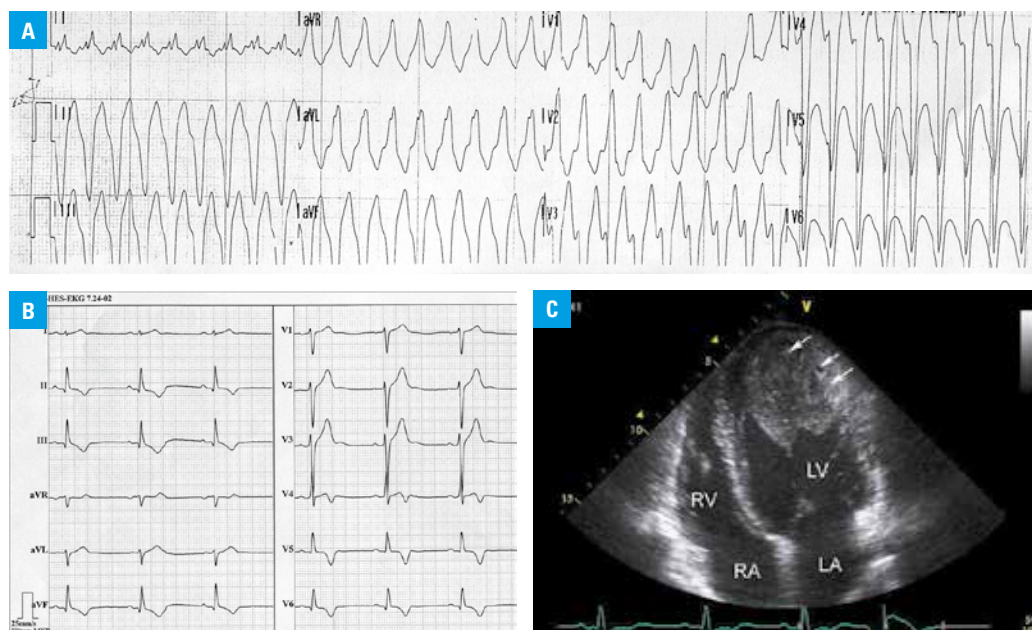
³ Department of Interventional Cardiology and Angiology, Institute of Cardiology, Warsaw, Poland

⁴ II Department of Clinical Radiology, Medical University of Warsaw, Warsaw, Poland

A 30-year-old man was referred to our hospital because of sustained ventricular tachycardia, which occurred when he was playing soccer (FIGURE A). Electrocardiography showed normal sinus rhythm with deep negative T waves in inferior and lateral leads (FIGURE B). Echocardiography revealed a giant tumor in the left ventricle, protruding into the ventricular chamber and deforming the papillary muscles (FIGURE C). Angiography demonstrated rich vascularization of the tumor from both coronary arteries (FIGURE D). Cardiac magnetic resonance showed the areas of fibrosis and calcification within the tumor (FIGURE E). Positron emission tomography excluded malignant tissue proliferation. Gated single photon emission computed tomography with technetium sestamibi showed no perfusion

within the apical and inferolateral segments of the left ventricle (FIGURE F). Endomyocardial biopsy was not performed because of the high risk of bleeding.

The patient received oral anticoagulants, β -blockers and amiodarone to diminish the risk of ventricular arrhythmia. An implantable cardioverter-defibrillator (ICD) was used to prevent sudden cardiac death. During follow-up, a daily dose of amiodarone was reduced by half because of the abnormal levels of thyroid-stimulating hormone. Four years later, "electrical storm" occurred and the former higher dose of amiodarone was restored (200 mg daily), which proved to be effective for arrhythmia prevention. A supplementation with thyroxine was initiated because of impaired thyroid function.



Correspondence to:
Olgierd Woźniak, MD, Instytut
Kardiologii im. Kardynała Stefana
Wyszyńskiego, ul. Alpejska 42,
04-628 Warszawa, Poland,
phone: +48-22-34-34-263,
fax: +48-22-34-34-538,
e-mail: owozniak@wp.pl

Received: November 26, 2014.

Revision accepted:

December 1, 2014.

Published online: December 5, 2014.

Conflict of interest: none declared.

Pol Arch Med Wewn. 2014;

124 (12): 744-745

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Kraków 2014



FIGURE **A** – ventricular tachycardia with right bundle branch block morphology on a 24-hour electrocardiogram recording; **B** – normal sinus rhythm with deep negative T waves in leads II, III, aVF, and V_4 – V_6 ; standard 12-lead electrocardiogram; **C** – heterogenic mass located in the apical and lateral left ventricular myocardium, protruding into the ventricular chamber and deforming the papillary muscles (arrows); transthoracic echocardiogram, apical 4-chamber view; **D** – angiography of the left coronary artery showing tumor blush (femoral approach); **E** – hyperintense mass in the apex involving both papillary muscles and the posterior wall of the left ventricle; cardiac magnetic resonance with fat suppression; **F** – absent radiotracer uptake within the apical inferior, mid-inferior, apical lateral, and mid-inferolateral segments; gated single-photon emission computed tomography with myocardial perfusion assessed with technetium sestamibi

Abbreviations: LA – left atrium, LV – left ventricle, RA – right atrium, RV – right ventricle

After a complete discharge of the ICD battery, the patient refused to have it replaced because he was afraid of possible ICD interventions. However, the subsequent clinical course was uneventful.

During 9 years of follow-up, the size of the tumor has not increased, the function of the left ventricle has not deteriorated, and the patient has remained in good condition.