Kardiologia Polska 2016; 74, 4: 391; DOI: 10.5603/KP.2016.0048 ISSN 0022–9032

STUDIUM PRZYPADKU / *CLINICAL VIGNETTE*

Searching for the cause of syncope: non-sustained ventricular tachycardia or neurocardiogenic syndrome. Does it really need lengthy investigation?

W poszukiwaniu przyczyny omdlenia: nietrwały częstoskurcz komorowy czy zespół kardiodepresyjny lub wazodepresyjny. Czy naprawdę trzeba długo szukać?

Krzysztof Błaszyk, Adrian Gwizdała, Wojciech Seniuk, Michał Waśniewski, Stefan Grajek

Department of Cardiology, Poznan University of Medical Sciences, Poznan, Poland

A 57-year-old female presented with numerous episodes of fainting since she was 10 years old, including episodes of total loss of consciousness (TLoC) since 15 years of age. Subsequently, TLoCs were preceded with blurred vision, weakness, and dyspnoea. Since the age of 30 years, TLoCs were associated with other symptoms: painful tooth, dyspepsia, and other health problems with marked pain. In total, she experienced 60–70 presyncopic and 10–15 TLoC episodes. Moreover, arterial hypertension (45 years old) (up to 220/110–105 mm Hg) was treated with beta-blockers and angiotensin converting enzyme inhibitor. Her medical history included the sudden deaths of her brother aged 12 months (sudden infant death) and her sister at the age of two years (unknown cause). Her father suffered from three myocardial infarctions (MI) and died at the age of 50, and her sister, also an MI survivor, died at the same age. The patient underwent several surgeries (hysterectomy, appendectomy, cholecystectomy) and hospitalisations for suspected pancreatitis, cholecystitis, and hyperlipidaemia. Despite the symptoms and risk factors, no other diagnostic tests were performed. Next, cardiologic consultation was performed at 57 years old following another TLoC. The 24-h electrocardiogram (ECG) showed non-sustained ventricular tachycardia (nsVT, 9 × QRS) — mean heart rate (HR) 150 bpm. ECG monitoring showed sinus rhythm at mean HR 58 bpm (between 43 and 90 bpm), and some ventricular and supraventricular ectopy (180 and 216 per 24 h, respectively). She was admitted to our site suspected of VT for an electrophysiological study (EPS) and possible ablation. On admission, normal vital signs and impaired left ventricular relaxation on echocardiography were recorded. EPS including programed ventricular stimulation induced no arrhythmia. Tilt test (Westminster protocol) provoked TLoC with unmeasurable blood pressure after 4 min of 0.4 mg nitroglycerin sublingually; it was preceded by significant slowing of sinus rhythm to 45 bpm followed by 15 s asystole (Fig. 1), self-terminating, and spontaneous return of sinus rhythm. Mixed type vasovagal syncope was confirmed. Cardiac magnetic resonance was normal. Eligibility for pacemaker implantation was confirmed and she reported clinical improvement on the next day of the implantation and for another four weeks. No TLoCs occurred in the following four months. Despite numerous hospitalisations a final diagnosis of vasovagal syncope was not established or even suspected, and tilt test was not recommended. On the other hand, a single ambulatory ECG showing nsVT (9 × QRS) was enough to suggest cardiogenic TLoC secondary to ventricular tachycardia.

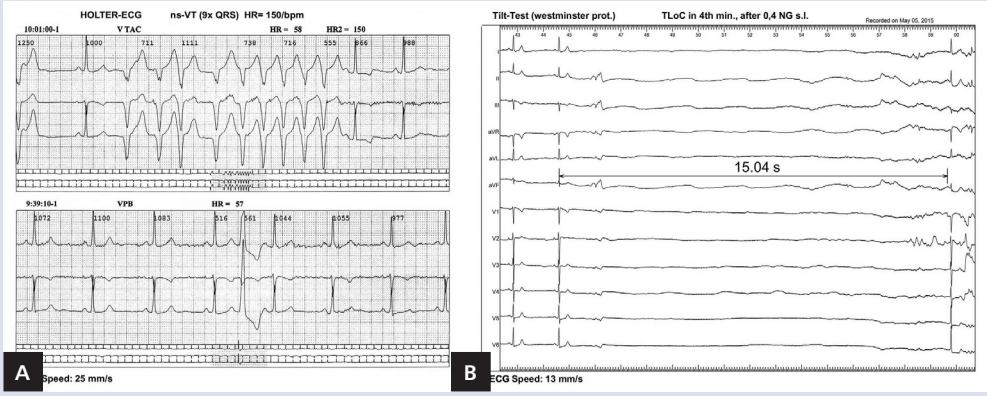

Figure 1. **A**. Ambulatory 24-h electrocardiogram (ECG speed 25 mm/s): non-sustained ventricular tachycardia (9 × QRS) mean heart rate 150 bpm; **B**. Tilt test using Westminster protocol (ECG speed 13 mm/s): after 4 min of 0.4 mg nitroglycerin, a 15-s asystole bringing about total loss of consciousness was observed that was preceded by slowing of heart rate to 45 bpm and blood pressure drop to unmeasurable values

Address for correspondence:
Krzysztof Błaszyk, MD, PhD, Department of Cardiology, Poznan University of Medical Sciences, ul. Długa 1/2, 61–848 Poznań, Poland, e-mail: kblaszyk5@gmail.com

Conflict of interest: *none declared*