International Journal of Cardiovascular Sciences. 2016;29(4):333-335

CASE REPORT

Saved by the X-ray

Ricardo Manuel Costa Rodrigues, Nuno Santos, Susana Gomes, Décio Pereira

Hospital Dr. Nélio Mendonça – Serviço de Cardiologia – Funchal – Portugal

In the emergency department setting, it is often difficult to provide proper diagnosis and potentially fatal diseases may appear in atypical forms. Clinical suspicion and complementary laboratory tests are important to define severe conditions. We report the case of a 36-year-old female patient with family and personal history of syncope. The patient was admitted in the emergency department with atypical symptoms of malaise, difficulty to say words and understand others and extreme fatigue. Chest X-ray clarified the case as it revealed a long-term monitoring device implanted years before and revealed an episode of torsades de pointes.

Introduction

In the emergency department setting, it is often difficult to provide proper diagnosis and some severe conditions may appear in atypical forms. Good medical evaluation, with complete clinical history and physical examination, must be performed. Clinical suspicion and complementary diagnostic tests are extremely important to rule out or diagnose serious severe medical conditions that may lead to death.

Case report

Female patient, 36 years old, with previous history of repetitive syncope and family history of cardiac sudden death (three first-degree cousins) was admitted to the emergency department with an episode of malaise, difficult to describe, finding it hard to say words and understand others and a sensation of extreme fatigue that lasted less than 5 minutes, which had begun while she was sitting.

She had been evaluated some years before for cardiac origin of syncope and performed many tests (several Holters, electrocardiography scans, echochardiography scans, tilt test) at another hospital, which found no cardiac cause. She was under medication with bisoprolol, trazodone and diazepam. The patient denied loss of consciousness or palpitations during the event and could not identify any trigger. She lied down and, after a few minutes, she had no more symptoms.

Upon admission to the emergency department, she was conscious, hemodynamically stable, without respiratory distress. Physical tests came out normal. Analytical study, electrocardiogram (ECG) and chest X-ray were performed. Blood results came out unremarkable and ECG (Figure 1) showed sinus rhythm with no ischemic abnormalities and normal corrected QT interval.

Discussion

Although symptoms were vague, the patient had an important high-risk sign for further cardiac evaluation as she had family history of sudden cardiac death.[1]

She had been admitted for a general malaise, with no associated syncope, but with a family history of sudden death and episodes of recurrent syncope. Therefore, cardiac origin and evaluation for the symptoms should always be considered. ECG showed no risk criteria and blood tests were normal.

X-ray clarified the case (Figure 2), showing a long- term monitoring device implanted 3 years and 1 month before, which she had forgotten to mention and forgotten she had, as she thought it was out of battery.

Keywords

Long QT syndrome; Electrocardiography, ambulatory; Torsades de pointes.

Mailing Address: Ricardo Manuel Costa Rodrigues
Av Luís de Camões, 57 – 9004-514 – Funchal – Portugal
E-mail: ricardomcr@gmail.com

DOI: 10.5935/2359-4802.20160032

Manuscript received on January 12, 2016; revised on June 05, 2016; approved on May 29, 2016.

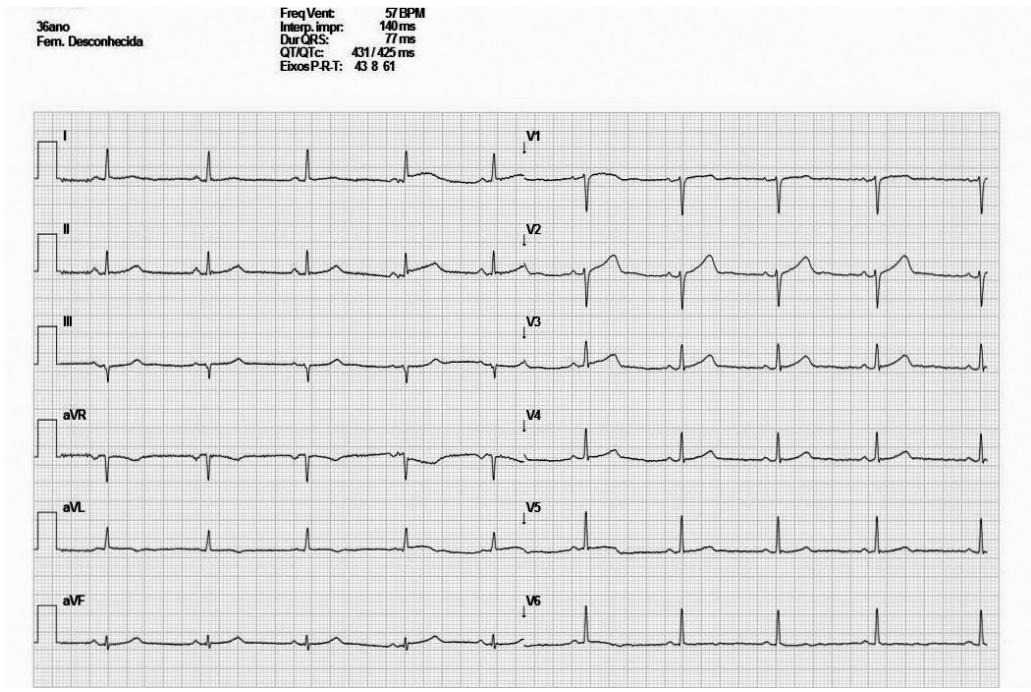

Figure 1
Admission ECG with sinus rhthm, no ischemic abnormalities and normal corrected QT interval.

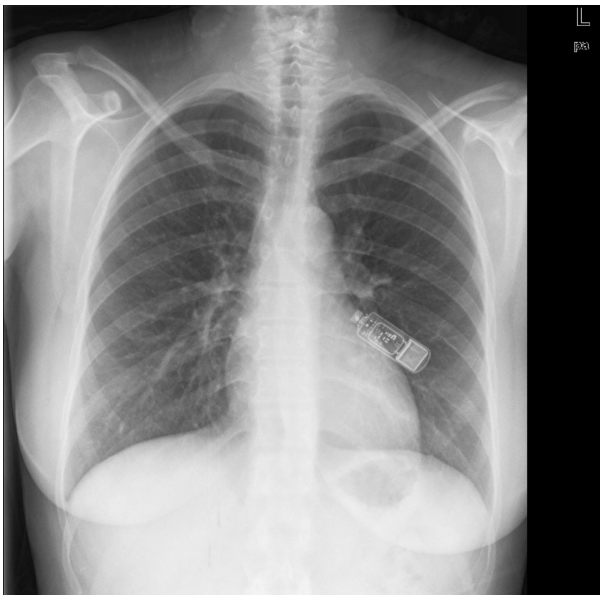

Figure 2
Chest X-ray with long-term monitoring device implanted.

The device revealed a 2 minutes and 47 seconds ventricular polymorphic tachycardia compatible with torsade de pointes (Figure 3). It was the first ventricular arrhythmia identified and the device was near it's lifetime (average device lifetime is 3 years). Further monitoring was established and the patient received an implantable cardioverter-defibrillator (ICD).

This case represents the everyday clinical difficulty in the evaluation of syncope/near-syncope of unknown origin. This patient suffered from a potentially fatal arrhythmia with uncharacteristic symptoms with no accompanying syncope. It is of extreme importance as the patient was about to be discharged home with a potentially fatal condition as her symptoms did not suggest any cardiac cause.

The patient had been thoroughly evaluated before and no cardiac origin was identified. This brings up the added importance of additional long-term electrocardiographic recorders[2,3] as sometimes they are the answer and the only way to identify a potential life-threatening condition.

The patient was diagnosed as having a long-QT syndrome (LQTS risk score > 3)[4,5] as a QTc interval of > 460 ms and < 480 ms was identified in a subsequent ECG recording. At 1 year follow-up, the patient is symptom free and no malignant arrhythmia was detected by the ICD.

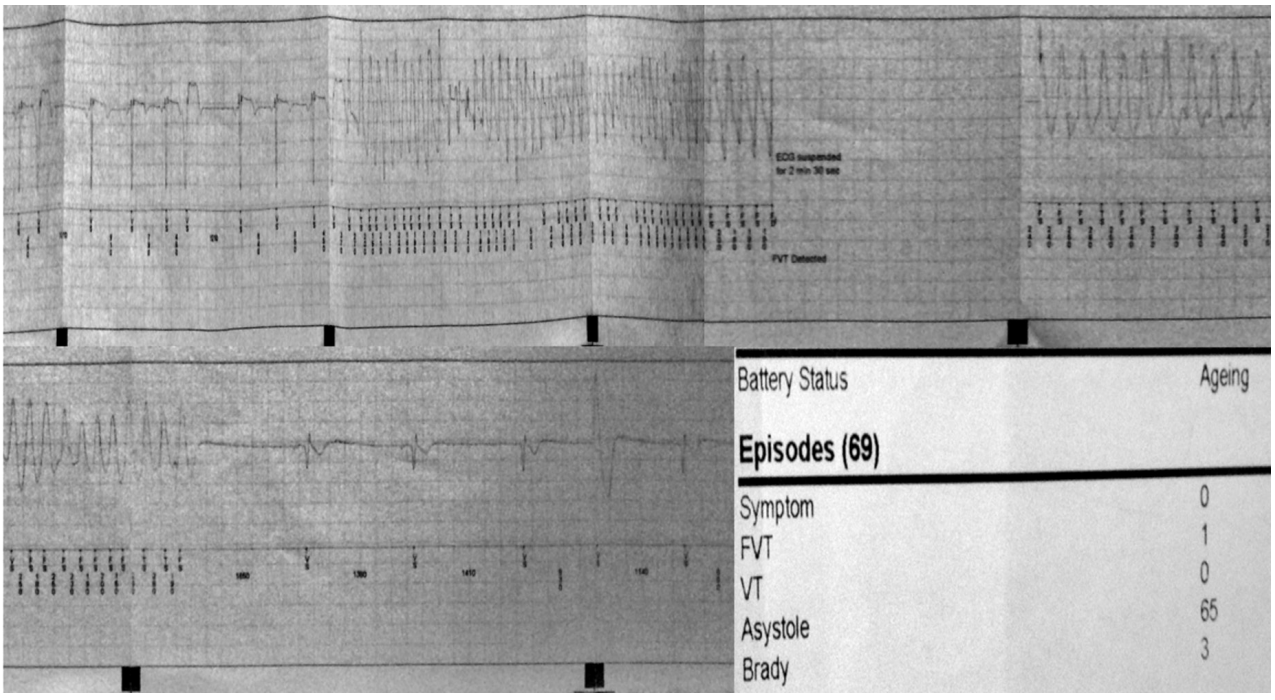

Figure 3
Device results showing 2 minutes and 47 seconds ventricular polymorphic tachycardia compatible with torsades de pointes.

Author contributions

Acquisition of data: Rodrigues RMC, Santos N. Analysis and interpretation of the data: Rodrigues RMC, Santos N. Writing of the manuscript: Rodrigues RMC, Gomes S. Critical revision of the manuscript for intellectual content: Gomes S, Pereira D.

Potential Conflicts of Interest

No potential conflict of interest relevant to this article was reported.

Sources of Funding

There were no external funding sources for this study.

Academic Association

This study is not associated with any thesis or dissertation work.

References

1. Task Force for the Diagnosis and Management of Syncope; European Society of Cardiology (ESC); European Heart Rhythm Association (EHRA); Heart Failure Association (HFA); Heart Rhythm Society (HRS), Moya A, Sutton R, Ammirati F, Blanc JJ, Brignole M, Dahm JB, et al. Guidelines for the diagnosis and management of syncope (version 2009). Eur Heart J. 2009;30(21):2631-71.
2. de Asmundis C, Conte G, Sieira J, Chierchia GB, Rodriguez-Manero M, Di Giovanni G, et al. Comparison of the patient-activated event recording system vs. traditional 24 h Holter electrocardiography in individuals with paroxysmal palpitations or dizziness. Europace. 2014;16(8):1231-5.
3. Volosin K, Stadler RW, Wyszynski R, Kirchhof P. Tachycardia detection performance of implantable loop recorders: results from a large 'real-life' patient cohort and patients with induced ventricular arrhythmias. Europace. 2013;15(8):1215-22.
4. Schwartz PJ, Moss AJ, Vincent GM, Crampton RS. Diagnostic criteria for the long QT syndrome. An update. Circulation. 1993;88(2):782-4.
5. Priori SG, Blomström-Lundqvist C, Mazzanti A, Blom N, Borggrefe M, Camm J, et al. 2015 ESC Guidelines for the management of patients with ventricular arrhythmias and the prevention of sudden cardiac death: The Task Force for the management of patients with ventricular arrhythmias and the prevention of sudden cardiac death of the European Society of Cardiology (ESC). Endorsed by: Association for European Paediatric and Congenital Cardiology (AEPC). Eur Heart J. 2015;36(41):2793-867.