

Resistant Torsades de Pointes After Use of Slimming Pills: A Case Report

Zayıflama Hapı Kullanımı Sonrası Dirençli Torsades Pointes: Olgu sunumu
Acil Tıp

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Emre Salçın¹, Özge Ecmel Onur¹, Serkan Emre Eroğlu¹, Ömer Faruk Çelik¹, Merter Gümüşel¹

¹ Marmara Üniversitesi Pendik Eğitim ve Araştırma Hastanesi

Özet

Torsades de pointes (TdP), polimorfik ventriküler taşikardinin spesifik bir varyantıdır. Biz bu yazıda, ismini bilmediği bir zayıflama hapı kullanımı sonrası tedaviye dirençli, sayısız torsades de pointes atakları gelişen genç bayan hastayı ele alacağız. Otuz yaşında bayan hasta senkop hikayesi ile acile getirildi. Vital bulguları, fizik muayene bulguları, elektrokardiyografi bulguları ve rutin laboratuvar testleri tamamen normaldi. Bilinen hastalık öyküsü yoktu. Taburculuğu planlandığı esnada aniden kardiyak arrest oldu. Spontan dolaşımı sağlandıktan sonra 72 saat boyunca defalarca Tdp atakları oldu. Hasta kendine geldikten sonra geçmiş medikal hikayesini tekrar sorguladığımızda ismini bilmediği bir zayıflama hapını 5 gündür kullandığını ifade etti. Hekimler zayıflama haplarının olası yan etkilerinin farkında olmalıdır. Onlar hastalarını bu ajanların heterojen yapıları ve potansiyel riskleri konusunda uyarmalıdır. Ayrıca bu tür şüpheli yan etkileri kendi ulusal rapor sistemine bildirmelidirler.

Anahtar kelimeler: *Torsades de Pointes, Zayıflama hapları Disritmi*

Abstract

Torsades de pointes ("twisting of the points") (TdP) is a specific variant of polymorphic ventricular tachycardia. Here, we report a young woman who has taken no-name herbal slimming pills, had numerous TdP episodes resistant to the treatment. A 30-year-old female presented with history of syncope. Her vital signs, physical examination findings, electrocardiogram findings and laboratory tests were normal. She had no known disease. During the discharging process, suddenly she had a cardiac arrest. After the restoration of spontaneous circulation, she had numerous TdP episodes restored after 72 hours. In detailed past medical history, we learned that she has taken no-name herbal slimming pills for 5 days. Physicians need to be aware of the slimming pills side effects. They should warn their patients about the heterogeneous nature of these agents and the potential risks. They should report suspected adverse reactions to their national spontaneous reporting system.

Keywords: *Torsades de pointes, Weight loss pills Dysrhythmia*

Introduction

Obesity is a major public health problem nowadays. And, it may increase the possibility of the development of numerous diseases such as cardiovascular diseases and diabetes mellitus. The identification of potential molecular targets susceptible to be manipulated from external factors, particularly food and drug agents may assist people in gaining control over appetite allowing obesity prevention¹. So, we see that many people use herbal anti-obesity products. It may attract users because of their health claims, assumed safety, easy availability and extensive marketing. In addition to this, these products can be very heterogeneous in nature and have unpredictable levels of active ingredients, and unpredictable and potentially harmful effects.

Here, we report a young woman who consumed herbal product for its slimming effects and which resulted in torsades de pointes (Tdp) which was refractory to treatment.

Case Report

Sorumlu Yazar: Serkan Emre Eroğlu, Marmara Üniversitesi Pendik Eğitim ve Araştırma Hastanesi
Marmara Üniversitesi Pendik Eğitim ve Araştırma Hastanesi, Acil Tıp Ana Bilim Dalı, Kaynarca-Pendik
drseroglu@gmail.com

A 30-years-old woman presented to the emergency department (ED) with history of sudden onset feeling unwell and syncope. Her Glasgow Coma Scale (GCS) score was 15 and her vital signs were normal at presentation. There was no special finding in physical examination and laboratory tests. She had no known prior disease, but she has been taking herbal slimming pills for 5 days. Her family said that she purchased these no-name pills over the internet. The initial electrocardiogram (ECG) showed sinus rhythm (Figure 1).

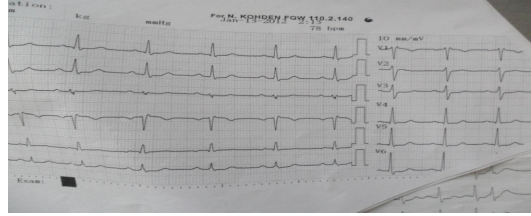


Figure 1

First ECG of patients in admission to emergency department. Normal ECG findings.

At the first hour of the presentation, she had sudden cardiopulmonary arrest due to ventricular tachycardia (Figure 2). After 10 minutes of cardiopulmonary resuscitation (CPR) according to the ACLS (Acquired Cardiac Life Support) Pulseless Arrest Algorithm, spontaneous circulation was restored.

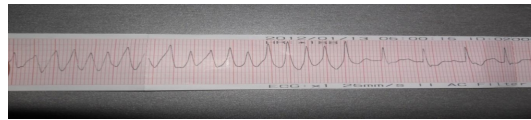


Figure 2

Monitor output of the patient during cardiac arrest. Ventricular tachycardia

Electrolytes were normal except potassium (3, 29 mEq/l) and it was corrected properly. Three minutes after recovery of the spontaneous circulation, she had VF again. CPR according to the ACLS started, and 300 mg amiodarone intravenously (i.v) bolus and 150 mg amiodarone infusion i.v. over ten minutes were given . After 200 joule defibrillation, the sinus rhythm was achieved. However, soon after the rhythm was TdP again (Figure 3). In the ECG monitor, when torsades rhythm seen, cardiopulmonary resuscitation started; magnesium and amiodarone treatments were given.

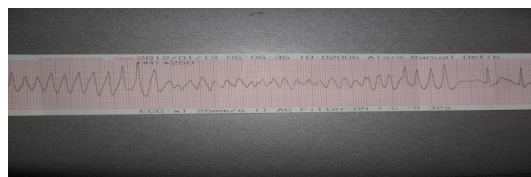


Figure 3

Monitor output of the patient after cardiac arrest. Torsades de pointes as ECG finding.

All throughout the CPR, she was defibrillated approximately 80 times for ventricular fibrillation (VF) in ED. She was admitted to coronary care unit (CCU) with normal sinus rhythm at the end of nearly 220 minutes. She needed defibrillation at CCU 50 times more. Magnesium and lidocaine infusions were continued, and her supportive treatment along with close electrophysiological monitoring was carried on. The patient was discharged after 10 days without any neurological deficit and with normal ECG findings.

The final diagnosis was TdP secondary to herbal slimming pills. Her dysrhythmia had a “probable” association

with the use the herbal slimming tablets, based on the Naranjo score of 7 points ².

Discussion

As it is a high cost problem in developed countries, obesity is also becoming a huge problem in developing countries with increased morbidity, mortality and cost price ³.

In a study surveyed by Blanc and colleagues ⁴, in USA, unprescribed weight loss product use calculated 15.2 % among adults. Women aged between 18-34 were the leading users (% 16.7) and more than one cardiotoxic agents were detected in 73.8 % of these products ⁵. Exact number, composition and therapeutic intervals of these weight loss products are unknown. In a study ⁶, possible arrhythmogenic effects of weight loss products sold on the internet were investigated and in 8 out of 12 products, one or more than one compound with the possible life-threatening cardiac side effects were detected. One of these products consists of ephedra which is still illegal in the USA.

A progressively increasing number of cardiac and noncardiac drugs prolong the ventricular action potential duration (QT interval of the ECG) and causes a distinctive polymorphic ventricular tachycardia that can degenerate into VF and SCA. Medications that cause QT interval elongation are antiarrhythmics, non-sedative antihistaminics (terfenadine and astemizole), macrolides, some psychotropics and some gastric motility agents (cisapride) ⁷. In a case report, a young woman patient without any underlying cardiac disease, continuous torsade attacks, frequently recurring and in need of defibrillation were seen after cisapride use and persistent vomiting had caused electrolyte imbalance ⁸. In a 5 day interval more than 300 times of defibrillation were applied and at the end, patient survived without any sequelae. Also, electrolyte disturbances, especially hypokalemia and hypomagnesemia can predispose TdP.

Medication related torsade, without any doubt, will be seen more in women. The underlying reason may be that women are more concerned about their appearance, or may be more prone to arrhythmogenic effects of these substances. To be precise, the women buy more herbal products for different reasons to be investigated in the future.

Different polymorphic ventricular tachyarrhythmia may cause syncope or cardiac arrest in patients with no heart disease. In treatment of torsade rhythm it was shown in many cases that magnesium sulphate treatment is effective ⁹. In treatment of recurring polymorphic ventricular tachycardia, during the time for total elimination of the causative agent from body, using a temporary pacemaker which supports the patient with 100-120 bpm is a reasonable treatment choice ⁹. There are good evidences that amiodarone against some dysrhythmias is more effective and superior to other medications ¹⁰. But in the lack of response to amiodarone as in our case, a review of the literature and the authors' experience indicate that lidocaine is a potentially useful therapy in torsade ¹¹.

Actually most of the published evidence of slimming drugs' adverse effects were found in case reports. There is no clinical study. In one case report, slimming regimen pills containing phentermine and chlorpheniramine has been associated with polymorphic ventricular tachycardia ¹². The patient has successfully been treated with magnesium sulfate infusion without recurrence of TdP and has had an uneventful recovery over a period of 36 hours. In another case, weight loss pills purchased on the internet had caused VF ¹³. Another was about an otherwise healthy woman with a history of palpitations who survived SCA from a ventricular dysrhythmia ¹⁴.

Despite magnesium and potassium therapy, dysrhythmia continued in our patient. Although, the active substance in the drug was unclear, her condition revealed an intoxication by an adrenergic drug stimulation. The apparent relationship between the initiation of treatment and the onset of electrocardiographic abnormalities, the absence of other precipitating factors, and the final normalization of QT interval after discontinuation of the drug, strongly suggest a causal relationship between herbal product and this adverse clinical event in our case.

In conclusion, everybody wants an easy way to control obesity and lose weight. Herbal anti-obesity products attract users because of their health claims, assumed safety, easy availability and extensive marketing. These products can be very heterogeneous in nature and have unpredictable levels of active ingredients. However, since most of these drugs help weight loss by adrenergic stimulation, physicians should be aware of cardiotoxic effects.

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Information Presentation

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