

The Unusual Cause of Dangerous Arrhythmias at the Young

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Abstract

Objectives: The main objectives of this clinical case presentation was to found the real cause of dangerous arrhythmias (frequents polymorphic premature ventricular bates and repeated passes of none sustained ventricular tachycardia) at a young patient.

Methods: I present the clinical case of a young woman patient 21 years old, who came at the consultation for irregular palpitations after increase physical effort—mountain climbing—her favorite sport activity. At the objective examination were found irregular heart bates HR=98 bates/min, without murmur heart or added sounds, BP=150/90 mmHg, normal vesicular breath sound on the lung. The EKG showed: sinus rhythm, HR=98 bates/minutes, many polymorphic premature ventricular bates and a short pass of a non sustained ventricular tachycardia (less than 30 seconds). The patient was monitored and followed antiarrhythmic therapy with xilin iv bolus 1 mg/kg body and after that double dose of xilin 1% i.v. in perfusion during the first 24 hours with disappears of the dangerous arrhythmias and after that remain on beta-blocker therapy- Carvedilol 6, 25 mg daily. In the first instance these dangerous arrhythmias were put in context of increase physical effort. The usual laboratory tests and the specific cardiac enzymes: Troponin I and CPKMB were in normal range and was excluded a heart attack. The levels of TSH, Free T3, FreeT4 were normal and the thyroid ultrasound-normal, excluding a possible thyroidal disease (hyperthyroidism-Basedow Graves disease or toxic thyroid adenoma and cardiomyopathy). The level of electrolytes (potassium, magnesium, calcium, sodium, chloride) were normal so a dyselectrolytemia was excluded like a cause of these dangerous arrhythmias. Transthoracic echocardiography put in evidence unexpected a solid mass inside of the left ventricular cavity. The patient was referred to the Cardiovascular Surgery Department. The formation was removed from the left ventricular cavity and the result of the histopathological examination confirmed safe the diagnosis of ventricular myxoma.

Results: The atrial myxoma is common in medical literature, but rare. Ventricular myxoma is very uncommon, rare and sometimes can develop so dangerous arrhythmias like repeated passes of ventricular tachycardia and also polymorphic premature ventricular bates and can put in danger patient's life because of risk of degeneration in ventricular fibrillation and cardiac arrest.

Conclusion: Sometimes, rare, an unknown ventricular myxoma could be the real cause of dangerous arrhythmias in the young and must to be removed.

Keywords: Arrhythmias; Young; Unusual cause

Introduction

Dangerous arrhythmias such as, polymorphic premature ventricular complexes and repeated episodes of nonsustained ventricular tachycardia which can degenerate into sustained ventricular tachycardia, ventricular fibrillation and cardiac arrest are more common in elderly patients and unusual in young. When they occur at both ages, their etiology must be found, for the patient to benefit from solving real cause, not only to follow the simple anti-arrhythmic therapy. In the clinical case follow to be presented, the real cause of dangerous arrhythmias in a young patient was an exotic cause, a ventricular myxoma, unpredictable first time. Primary intracardiac tumors are rare and a cardiac myxoma is by far the most common type of primary cardiac tumor. Left ventricular localization of a myxoma is accounting for 2.5%-4% of all cases [1]. In 1997, Meller et al. noted the low prevalence of LV myxoma. At that time only 15 cases have been

reported in the English and French literature [2]. Left ventricular (LV) myxomas are extremely rare with only 37 cases reported in the literature up to 1996 [3].

Patient and Methods

I present the clinical case of a young woman patient 21 years old, who came at the consultation for irregular palpitations after increase physical effort—mountain climbing—her favorite sport activity. At the objective examination were found: irregular heart bates, HR=98 bates/min, without murmur heart or added sounds, BP=150/ 90 mmHg, normal vesicular breath sound on the lung auscultation. The EKG showed: sinus rhythm, HR=98 bates/minutes, many premature ventricular complex (PVC's) looks multifocal image more than one shape and a short pass of a non sustained ventricular tachycardia (less than 30 seconds) looks like in the image below (Figure 1).

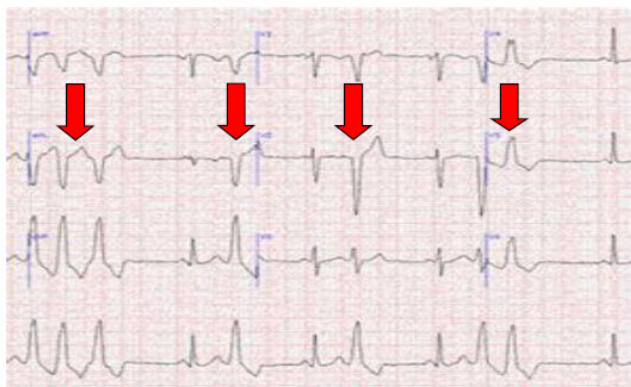


Figure 1: The EKG - sinus rhythm, HR=98 bates/minutes, a short pass of a non sustained ventricular tachycardia (less than 30 seconds) and polymorphic premature ventricular complexes indicates with red arrows.

The results of usual laboratory tests were in normal range: cholesterol=110 mg/dl, HDL cholesterol=30 mg/dl, LDL cholesterol=24 mg/dl, Triglycerides=102 mg/dl, Glycemia=86 mg/dl, Hb=12 mg/dl, ASAT=23 UI/l, ALAT=32 UI/l, Creatinine=1.1 mg/dl, Urea=31 mg/dl, urine summary-normal, urine sediment-normal.

The specific cardiac enzymes were in normal range and was excluded a heart attack. The level of Troponin I=0.01 ng/mL and CPKMB=0.067 ng/mL.

The levels of electrolytes were: potassium=4.2 mEq/l, magnesium=3.1 mEq/l, calcium=4 mEq/l in normal range so a dyselectrolytemia was excluded like a cause of these dangerous arrhythmias.

The thyroidal hormones level was in normal range: TSH=1.2 U/mL, Free T3=0.7 ng/dL, FreeT4=0.8 ng/dl and the thyroid ultrasound-normal, excluding a possible thyroidal disease (hyperthyroidism-Basedow Graves disease or toxic thyroid adenoma and cardiothyreosis as well). The thyroid ultrasound-normal-showed in the image below (Figure 2) looks with normal dimensions, regular, normal echogenicity without nodules in the parenchyma gland.

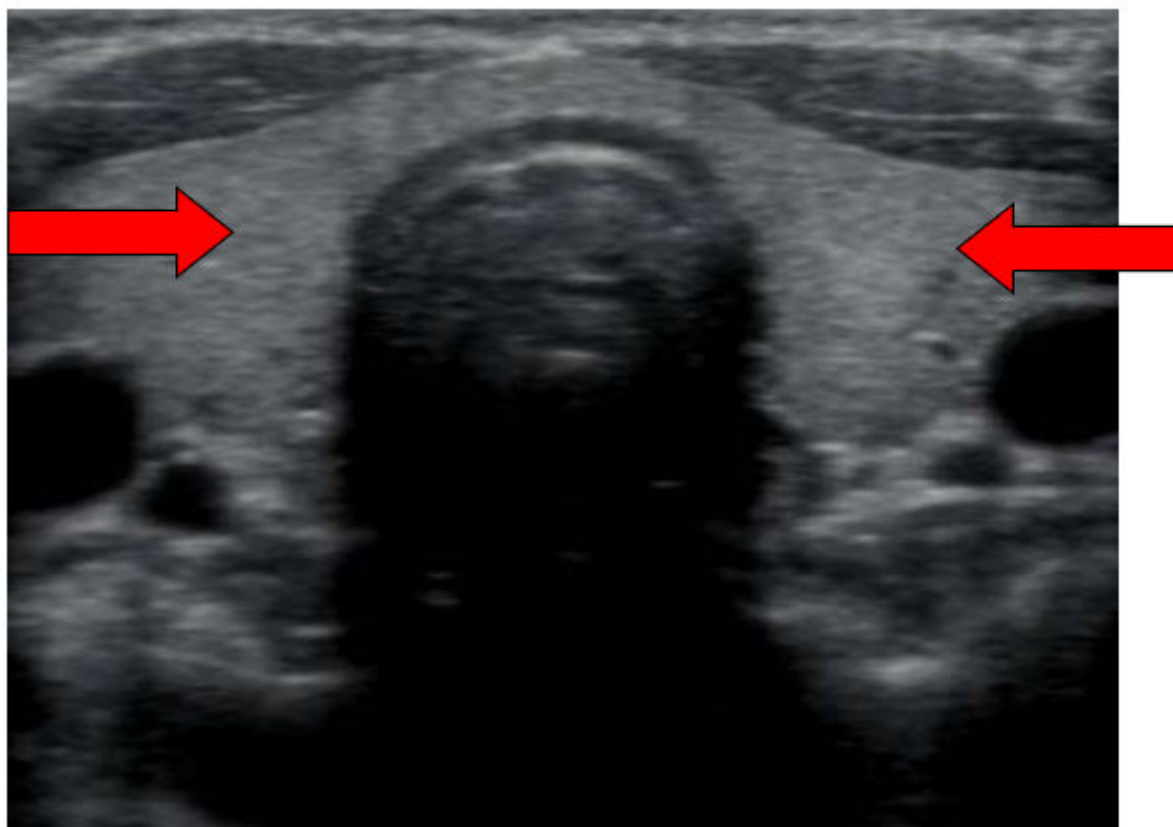


Figure 2: The thyroid ultrasound-normal dimensions, regular, normal echogenicity without nodules in the parenchyma gland.

The patient was monitored and followed immediately antiarrhythmic therapy with xilin i.v. bolus 1 mg/kg body and after that double dose of xilin 1% i.v. in perfusion during the first 24 hours with disappears of the dangerous arrhythmias and after that remain on beta-blocker therapy-Carvedilol 6, 25 mg daily for prevention of the

premature ventricular complexes. In the first instance the evolution of this young patient was good and the etiology of these dangerous arrhythmias was put in context of increase physical effort, but the patient heart rhythm was followed with the Holter Monitor (24 hours). A Holter monitor (24 h) was performed and put in evidence,

unexpected, two short passes of non sustained ventricular tachycardia (less than 30 seconds) and a few premature ventricular bates polymorphic, looks multifocal image more than one shape and one couplets PVC's and two couplets PVC's shown in the image bellow (Figure 3).

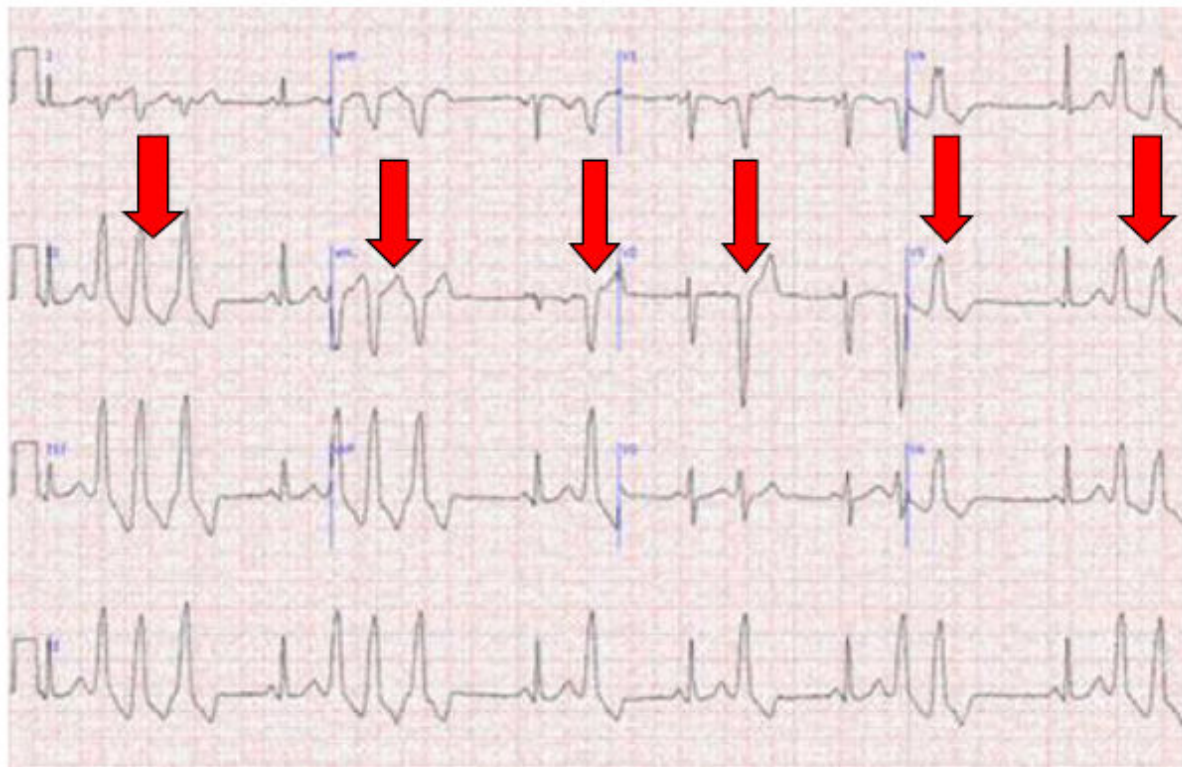


Figure 3: The HOLTER MONITOR (24 hours) put in evidence two short passes of non sustained ventricular tachycardia (less than 30 seconds) and a few polymorphic premature ventricular bates and two couplets indicates with red arrows.

In this situation she needs i.v. antiarrhythmic therapy again with xilin i.v. bolus 1 mg/kg body and after that double dose of xilin 1% i.v. in perfusion during the first 24 hours with good evolution of the patient with disappears of the dangerous arrhythmias and after that remain on beta-blocker therapy- Carvedilol 6, 25 mg (2X1 tb/daily) with good control of these.

After this event, a transthoracic echocardiography was performed and put in evidence unexpected a solid mass inside of the left ventricular cavity, shown in the image bellow (Figure 4)

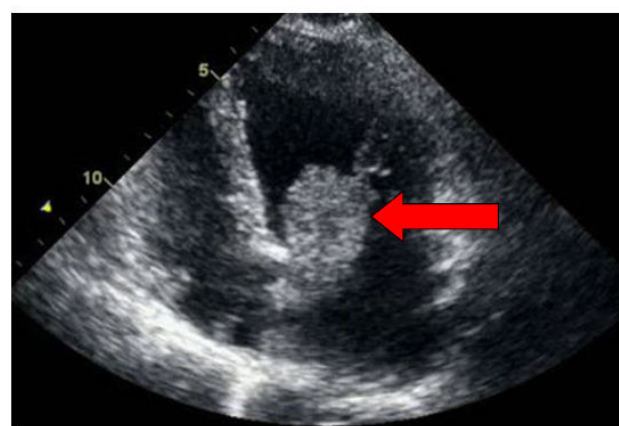


Figure 4: Image of the transthoracic echocardiogram shows a solid mass-indicate with red arrow-attached to the septum prolapsing into the ventricle.

In this moment, the most important question was which is the etiology of this solid mass?

This unexpected formation put problem of differential diagnosis regarding the etiology such as: a thrombus? A vegetation formation? But this must to be present on a valve in endocarditis not in this area, a cyst? A tumor formation? A transesophageal echocardiography (TEE) was performed and showed the same solid mass inside of the left ventricular cavity.

After these investigations, the patient was referred to the Cardiovascular Surgery Department. The formation was removed from the left ventricular cavity and the result of the histopathological examination (Figure 5) confirmed safe the diagnosis of ventricular myxoma, revealed rings develop by myxoma cells.

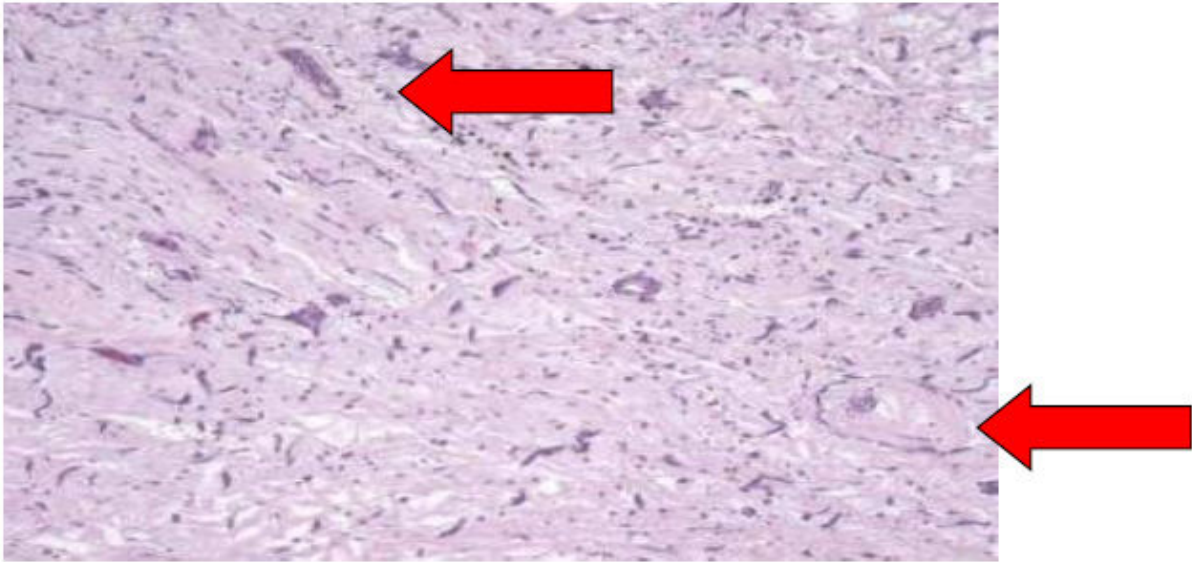


Figure 5: Histopathology examination with hematoxylin eosin staining revealed rings develop by myxoma cells, indicates with red arrows.

Results and Discussions

The atrial myxoma is common in medical literature, but rare. Ventricular myxoma is very uncommon, rare and sometimes can develop so dangerous arrhythmias like repeated passes of ventricular tachycardia and also premature ventricular beats polymorphic and polytypic and can put in danger patient's life because of risk of degeneration in ventricular fibrillation and cardiac arrest. This case is particular, because the sudden onset was with these dangerous arrhythmias in context of high physical effort. Alarming were the episodes of non sustained ventricular tachycardia, interpreted in the first instance during excessive mountain climbing, but the reality appeared after investigations.

Conclusion

Sometimes, rare, unknown ventricular myxoma could be the real cause of dangerous arrhythmias in the young and must to be removed to can save the patient's life.

References

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