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# CAN KILL THE "KYAI" ?

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**Abstract:**

***Is usually the belief that a powerful cry emerged from the abdomen, practitioners of martial arts, called Kyai, you can kill someone and, of course, to lose consciousness or even cause general paralysis. All these feats are usually collected in episodes of Oriental books but what is there in all this?***

***This demonstrated that people who have a heart disorder known as long QT syndrome can die from a powerful hearing noise that comes on suddenly.***

***This anomaly may justify some of the legendary episodes recounted in Oriental texts. Pathology is silent. Sudden death after physical exertion and / or intense auditory stimulation.***

***In the 19th century and in the East many cardiocirculatory pathologies such as hypertension, heart rhythm disturbances or valvular diseases are not diagnosed. Nor were evident unless mediases intense efforts stres or intense situations. It is possible that a Kyiai, of someone who had a reputation for great warrior, could trigger the disease with fatal consequences, although their share I did not have to be high since the stories are anecdotal and not given as usual facts.***

***Death by noise, in this case by the Kyai, is impossible if the heart is healthy. If that can cause sudden loss of consciousness following the issuance of a Kyai. The cause is due to the so-called "vasovagal syncope"***

***In this study we will evaluate the possibility of producing a loss of consciousness after a Kyai. We will cherish electrocardiographically what happens in different circumstances. We choose 12 people without cardiac problems divided into four groups with different circumstances.***

***We will show that, if any, is the "glass vagal syncope" the cause of the loss of consciousness. Death is impossible for cardiocirculatory rescue mechanisms***

**KEY WORDS:**
martial arts , Pathology , cardiocirculatory pathologies .

## INTRODUCTION

Death from shock occurs. This type of death has been christened "Baskerville effect" because a character in the novel "The Hound of the Baskervilles" by Arthur Conan Doyle, who has a heart attack caused by psychological stress end, to be attacked by a big dog in the middle of the night.

Although anecdotal, it is true. A big shock, extreme excitement or disgust huge trigger the release of many substances into the blood stress. This has been seen that may relate to so-called stress cardiomyopathy.

No doubt there is an alteration always silent, and encouragement must be from one extreme panic. Not so with a scream.

A disorder of the heart's electrical system, known as long QT syndrome (LQTS) is a potentially

fatal condition that can be caused by a strong ruido.En people with LQTS, the electrical recovery of the heart takes longer than Normal after each heartbeat.

Dr. G. Michael Vincent, an expert in LQTS, says: long QT syndrome is responsible for a large part of syncopal episodes and sudden death in adults. In people with LQTS, the electrical recovery of the heart takes longer than normal after each beat. These patients react very badly to elevated heart rate change: physical exertion, stress, or a start. The blood then it reaches the brain and can occur from syncope to sudden death.

Leaving aside this pathology between healthy subjects and the cause of syncope by a loud noise is "vasovagal syncope"

It has been suggested in syncope three causes: a disorder mediated via the nervous, sympathetic tone and vagal activity that result in excessive bradycardia, a difficulty in the sympathetic innervation of the blood vessels, or orthostatic hypotension, cardiac (arrhythmias), among others.

Vasovagal syndrome produces one of the most powerful vasodilation responses in humans. It is assumed that the initial event is a sudden vasodilation, particularly intramuscular arterioles caused by strong emotion or physical injury. Decreases peripheral vascular resistance and blood pressure falls. Cardiac function can not reach the expected rise that normally occurs in hypotension. Then there may be vagal stimulation (hence the term "vasovagal") which causes a marked bradycardia, with subsequent drop in blood pressure. Unconsciousness and pallor due to an inadequate blood supply to the brain and extracranial structures. The relaxation of arterial resistance vessels plays a small role. The temporary interruption of blood flow to the brain causes loss of consciousness in a period of 8-10 s when the systolic blood pressure falls below 70 mmHg, syncope appears. You lose consciousness when cerebral blood flow decreases overall 40% of normal.

This decline may indicate a reduction in cardiac output of 50% or more decrease in mean arterial pressure in an upright position within 40 to 50 mmHg. Like the gravitational factors contribute importantly to impaired venous return, impaired filling fainting

Right heart almost always occurs in the upright position, or sometimes sitting. Any cause syncope is much more common sitting or standing to lying.

Electrocardiographic sinus blockage can occur. Between the boot block and sinus rhythm there exhaust fifteen seconds pause, a brief cardiac arrest is known as Stokes-Adams síndrome

## MATERIALS AND METHODS

The tests are performed in medical center prepared with defibrillator.

To choose to study 12 volunteers divided into four groups of three. It excludes the offering paths with arrhythmias and / or long QT..A sudden jolt could cause sudden death. All subjects are monitored by ECG 'effort cord'

The first group are informed that after physical exertion and hyperventilation exercises Kyai launch them.

The second group simply inform them that he would send the Kyai but they will do any physical exercise and breathing exercises.

The third group will be informed that physical exercise but it made □ □breathing exercises. Not inform them that he would send the Kyai.

The fourth group will be informed who will carry out physical exercise and breathing exercises. Not inform them that he would send the Kiay

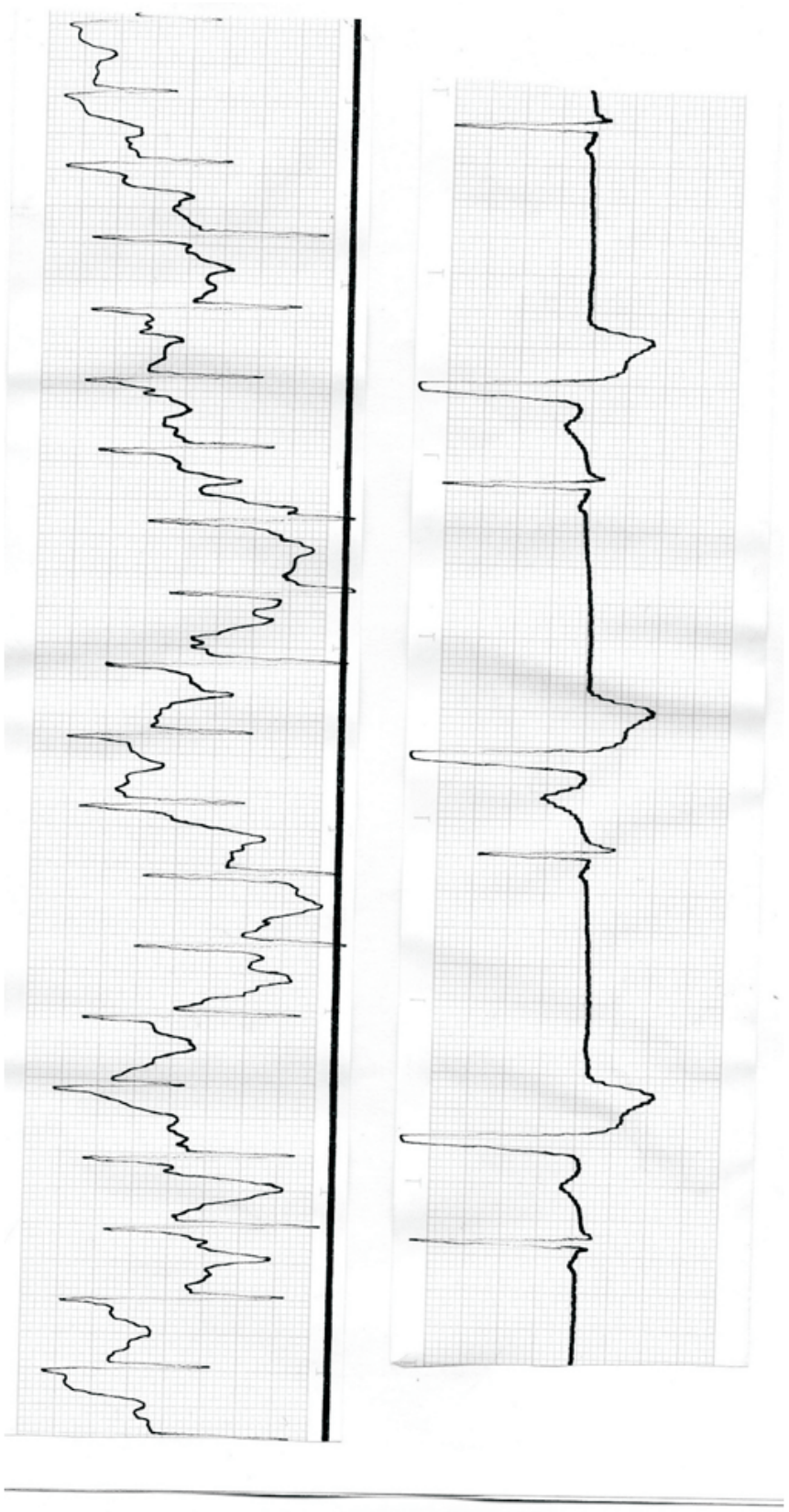
## RESULTS

Vasovagal syncope occur with sinus blocks and extrasistolias in two people who have made strenuous exercise and hyperventilation and that they were not warned that there would be a Kyai. His recovery was successful and without problems.

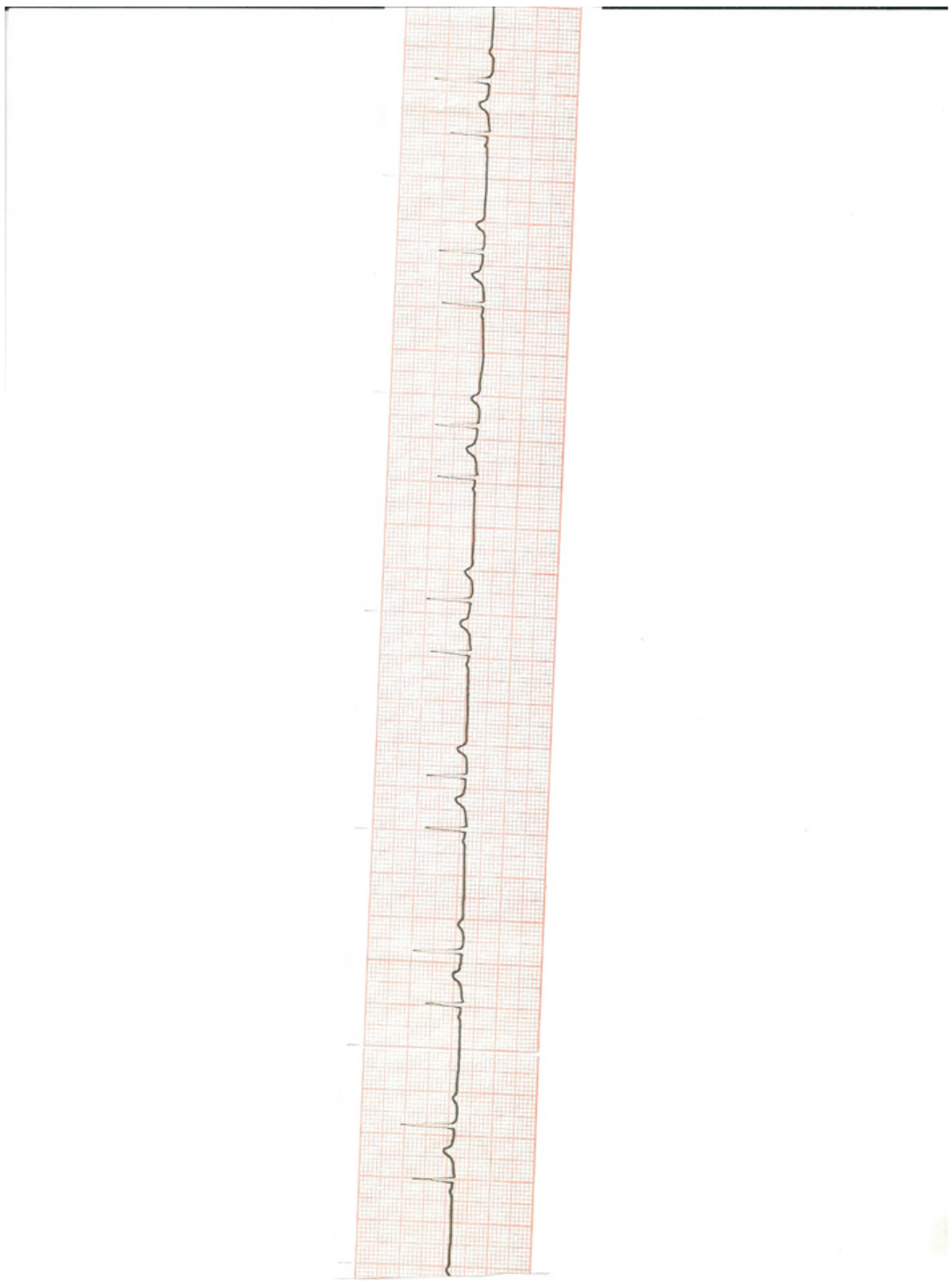
The groups to which they were warned that at some point it would launch a Kyai suffered no alteration. Those who had suffered hyperventilation temporary discomfort but did not lose consciousness. In the physical exercise group and not subsequently performed hyperventilation or were notified of the launch of Kyai, no syncope occurred. If there were surprises in the form of tachycardia.

## ECG RECORDS

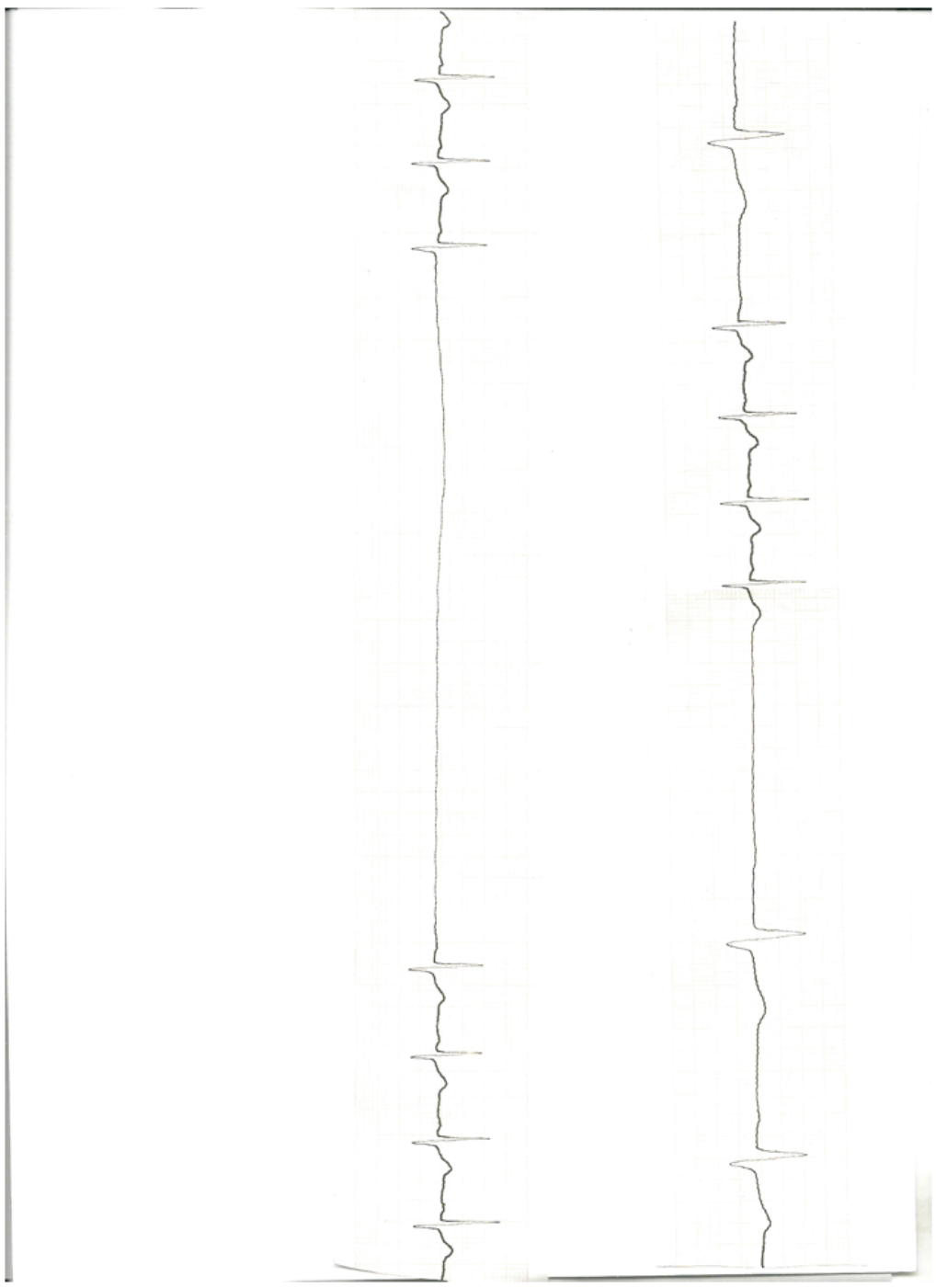
**Vasovagal syncope and subsequent recovery with compensatory tachycardia. Observed is arrhythmia initial**



**It excludes the offering paths with arrhythmias and / or long QT.**
**A sudden jolt could cause sudden death**



**Two records of syncope, two and four seconds. recovery was immediate.**



## CONCLUSIONS

The surprise of the issuance of a loud noise in the Martial Arts known as Kyai can cause vasovagal syncope in the very fatigued and hyperventilate after effort. In healthy people can not cause death because although the electrocardiogram is a healthy heart dramatic rescue mechanisms available for resuscitation.

Not so in pre-excitation syndromes, or long QT syndrome, uncontrolled hypertension, valvular or unknown cardiomyopathies.

Thus followed a rigorous cardiological screening in all those people who are going to practice a martial art to prevent sudden death.

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