ORIGINAL RESEARCH PAPER

General Medicine

AN INCIDENTAL FINDING OF VENTRICULAR TRIGEMINY IN YOUNG FEMALE – A CASE REPORT

KEY WORDS: Ventricular trigeminy, cardiac arrhythmia, electrocardiogram, echocardiogram.

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ABSTRACT

Ventricular trigeminy, a rare cardiac arrhythmia, is characterized by a unique pattern of every third heartbeat originating from the ventricles. This case report describes the presentation, diagnostic evaluation, and management of a young female presenting with ventricular trigeminy. The patient's clinical history, physical examination, ECG, echocardiogram, and Holter monitoring data are discussed. This case highlights the importance of recognizing and managing rare arrhythmias in young individuals to prevent potentially life-threatening complications.

INTRODUCTION:

Ventricular trigeminy is an uncommon cardiac arrhythmia characterized by a specific pattern of every third heartbeat originating from the ventricles. This condition is often benign but can lead to more severe arrhythmias if left untreated. We present a case of a young female with ventricular trigeminy, emphasizing the diagnostic workup and management of this rare arrhythmia.

Case Presentation:

A 20-year-old previously healthy female presented with complaints of fever generalised tiredness, headache and body pains for 5 days. Patient had complaints of palpitations and occasional dizziness over the past 2 months. She denied any chest pain, shortness of breath, or syncope. No other specific systemic complaints. Her medical history was unremarkable, with no family history of cardiac disease.

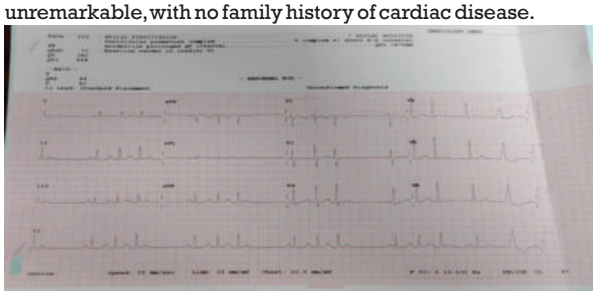

Figure 1: *ECG showing ventricular trigeminy*

On physical examination, her vital signs were within the normal range, and her cardiovascular examination, including heart sounds, was unremarkable. There were no signs of heart failure, murmurs, or other significant abnormalities. Patient was started with IV fluids, antipyretics, antacids and other supportive medications. ECG (fig:1) was done which showed multiple ectopic beats and diagnosed as ventricular trigeminy. Immediately 2decho was done which showed EF :57%, NO RWMA, regularly irregular rhythm present, mitral valve has mild AML prolapse. There were no structural abnormalities or signs of cardiomyopathy. Patient was advised with fluid restriction, diuretics. The patient underwent 24-hour Holter monitoring to assess the frequency and burden of PVCs. The monitoring confirmed the presence of ventricular trigeminy, with PVCs occurring approximately every third beat during periods of increased sympathetic activity, such as exercise. Conservative management was initiated. The patient was educated about lifestyle modifications to reduce triggers, including avoiding excessive caffeine, alcohol, and stress. The patient was scheduled for regular follow-up visits to assess her progress and symptomatology. During the follow-up period, she reported a gradual reduction in palpitations and dizziness. Repeat ECGs showed a decrease in the frequency of PVCs. She remained asymptomatic, and her quality of life improved significantly.

DISCUSSION:

Ventricular trigeminy is a cardiac arrhythmia characterized by a pattern in which every third heartbeat is a premature ventricular contraction (PVC), originating in the ventricles of the heart. It is a type of ectopic heartbeat rhythm. This condition can affect individuals of various age groups, including young individuals.

Causes And Risk Factors:

Ventricular trigeminy can be caused by various factors, including stress, caffeine intake, electrolyte imbalances, and certain medications. In some cases, it may be associated with underlying heart conditions. In young individuals, it may be more commonly related to lifestyle factors and less frequently to structural heart disease (1).

Clinical Presentation:

Young individuals with ventricular trigeminy may experience symptoms such as palpitations, dizziness, or a feeling of skipped heartbeats. However, some individuals may be asymptomatic, and the condition may be detected incidentally during routine medical evaluations or electrocardiogram (ECG) monitoring (2).

Diagnosis:

The diagnosis of ventricular trigeminy is typically made through an ECG, which shows the characteristic pattern of PVCs occurring every third beat. Further evaluation, including a thorough medical history and physical examination, may be necessary to identify underlying causes or risk factors (3).

Management:

The management of ventricular trigeminy in young individuals depends on the underlying cause and the severity of symptoms. Lifestyle modifications, such as reducing caffeine intake and managing stress, may be sufficient for

some. In cases where the arrhythmia is frequent or symptomatic, medication or other interventions may be considered (4).

Prognosis:

The prognosis for individuals with ventricular trigeminy depends on the underlying cause and how well it is managed. In many cases, with appropriate management and lifestyle modifications, the condition can be well-controlled, and individuals can lead a normal, healthy life (5).

CONCLUSION:

This case report highlights the diagnosis and management of ventricular trigeminy in a young, otherwise healthy female. While this arrhythmia is typically benign, healthcare providers should consider it in the differential diagnosis of palpitations and perform a thorough evaluation to rule out any underlying cardiac abnormalities. Timely diagnosis and management can help improve the patient's quality of life and prevent potential complications.

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