Case Report

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# Mesenteric Venous Thrombosis and Secondary Ileus Accompanied by Ventricular Bigeminy: A Rare Clinical Presentation

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## Abstract

A rare disorder called mesenteric vein thrombosis (MVT) can manifest acutely, subacutely, or persistently. Symptomatic cases usually appear as nonspecific abdominal pain, with or without evidence of intestinal ischemia. In patients with high clinical suspicion, the diagnosis is typically made by imaging tests (abdominal CT or MRI). Ventricular bigeminy is typically a benign arrhythmia but may accompany systemic inflammatory or metabolic disturbances. The coexistence of MVT, secondary ileus, and ventricular bigeminy is extremely rare.

**Keywords:** Mesenteric venous thrombosis, ventricular bigeminy, ileus, arrhythmia, case report, emergency medicine

## Introduction and Purpose

A cardiac arrhythmia known as ventricular bigeminy occurs when each regular heartbeat is followed by a premature ventricular contraction (PVC), resulting in a recurring pattern of paired beats. This condition is frequently brought on by re-entry circuits, parasystole, or triggered activity such early afterdepolarizations. Myocardial ischemia, pharmacological side effects, structural heart disease, electrolyte abnormalities (such as hypokalemia and hypophosphatemia), and even idiopathic events in healthy people can all be linked to it [1].

A rare but potentially fatal disorder called mesenteric venous thrombosis (MVT) occurs when blood clots develop in the mesenteric veins, reducing intestinal blood flow and increasing the risk of bowel ischemia or infarction. In patients with high clinical suspicion, the diagnosis is typically made by imaging tests (abdominal CT or MRI). About 90% of cases are diagnosed with contrast-enhanced CT [2]. Hypercoagulability, endothelial damage, and stasis; all of which may be components of a local or systemic process are frequently combined to cause MVT.MVT can develop spontaneously as an idiopathic occurrence or following brief or relatively modest insults in persons with hereditary hypercoagulability [3]. In this case, we will present a rare case of ileus secondary to mesenteric venous thrombosis accompanied by ventricular bigeminy.

## Case Presentation

A 84-year-old male patient applied to the emergency department with a complaint of vomiting and abdominal pain for 1 day. The patient has heart failure, arrhythmia, hypertension as a known chronic disease. When the patient arrives at the cricital care unit vital signs were; fever:36,5$^0$C, pulse:63/min, oxygen saturation(SpO2):95%, respiratory rate:20/min, arterial blood pressure:155/66 mmHg, fingertip blood sugar:186mg/dl. On physical examination, the patient's general condition was fine, Glasgow Coma Scale: 15 (Verbal5, Motor6, Eye4)

General tenderness on abdominal examination, no guarding or rebound was detected. In laboratory findings were, Urea: 39 mg/dl, blood ure nitrogen: 18 mg/dl, creatinine: 1.00 mg/dl, eGFR: 69 ml/min, calcium: 9.2 mg/dl,magnesium: 2.04 mg/dl, potassium 4.82 mmol/L, white blood cell: 9.37x 10$^3$/uL, hemoglobin: 14.4 g/dl, tropo-

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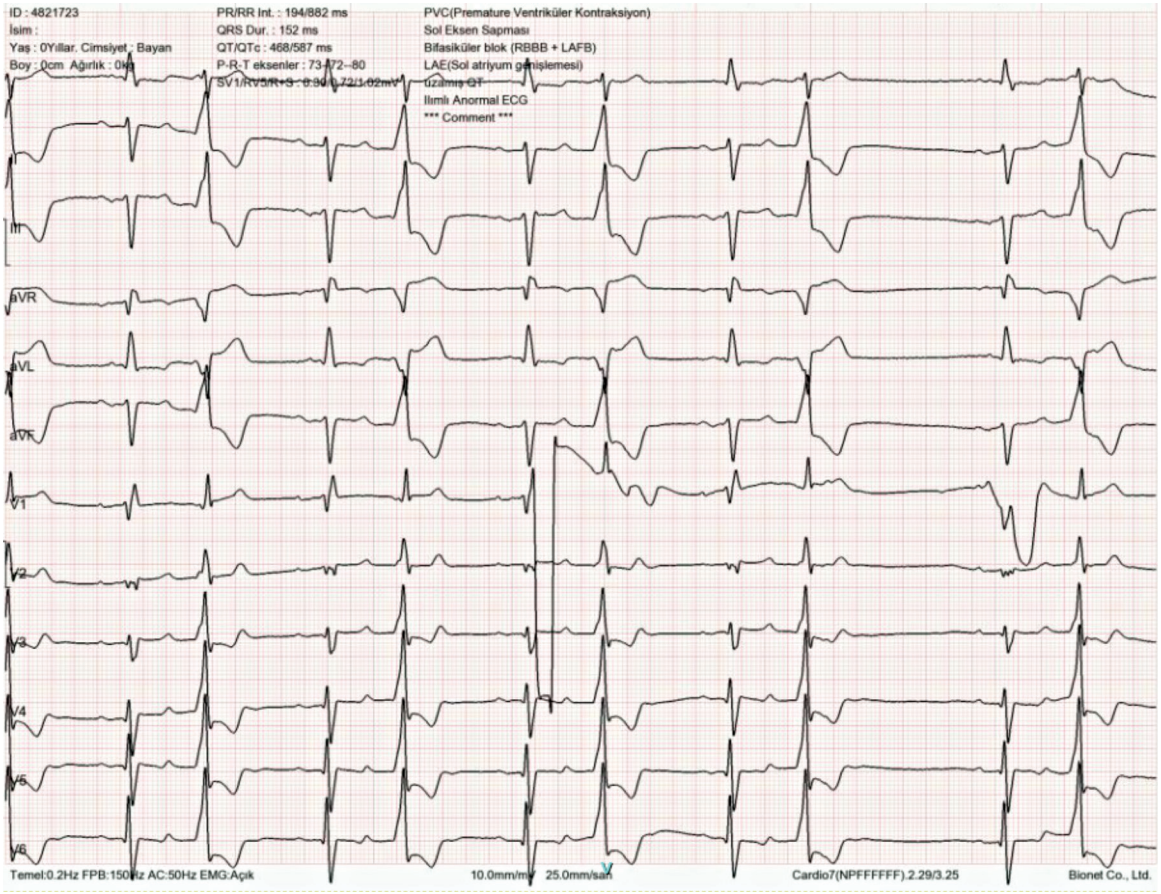


**Figure 1a-b.** ECG image showing ventricular bigeminy.

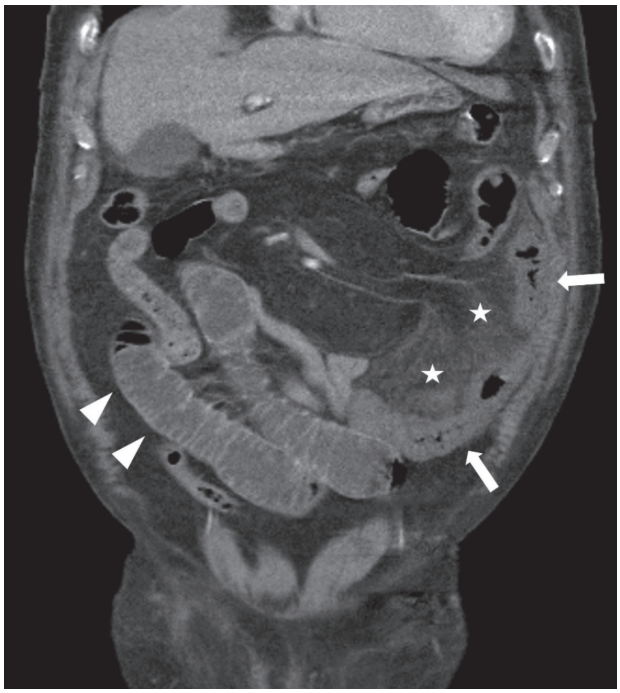

**Figure 2.** Monophasic whole-abdominal computed tomography with IV contrast is shown in the coronal plane, ischemic loops of the small bowel with diffuse wall thickness increase and no enhancement in the left abdominal quadrant (arrows). Marked edema and contamination are observed in the mesenteric fat planes surrounding the ischemic loops (stars). Dilated loops with normal wall enhancement compared to the ischemic loops are seen in the right abdominal quadrant (arrowhead).

nin-I: 7.7 ng/L, mass CK-MB: 3.1 µg/L, lactate:1.6 mg/dL, INR: 1.01, CRP: 3.8 mg/L.

## Discussion and Conclusions

MVT, or acute mesenteric venous thrombosis, is a rare condition with nonspecific symptoms. Whether intestinal infarction occurs depends on the location, size, and speed of thrombus development [4]. The coexistence of ventricular bigeminy and MVT is fascinating. Although arrhythmias are often caused by electrolyte imbalances or myocardial ischemia, they can also arise from systemic inflammatory or hypoxic stress. In this case, the ventricular bigeminy probably represented a temporary systemic response rather than an underlying cardiac condition. Prompt imaging is key in diagnosing MVT, as laboratory findings are nonspecific. **Contrast-enhanced CT** remains the gold standard, allowing visualization of thrombus and assessment of bowel viability. Treatment typically involves **anticoagulation**, supportive care, and in some cases, thrombolysis or surgical intervention if bowel necrosis develops.

## Resources

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