

# A Rare Presentation: Giant Left Ventricular Myxoma Causing Acute Lower Limb Ischemia in a Pediatric Patient

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## Abstract

Left ventricular myxomas are rare cardiac tumors, particularly in pediatric patients and their presentation with acute lower limb ischemia is exceptionally uncommon. We present a case of a giant left ventricular myxoma causing acute lower limb ischemia in a pediatric patient. A 10-year-old male presented with sudden-onset severe left lower limb pain and cyanosis. Imaging revealed a large mass obstructing the left ventricular outflow tract, causing compromised blood flow to the lower extremities. Urgent surgical intervention was performed to resect the myxoma and restore perfusion to the lower limbs. Histopathological examination confirmed the diagnosis of a left ventricular myxoma. This case highlights the importance of considering cardiac tumors in the differential diagnosis of acute limb ischemia, particularly in pediatric patients and underscores the need for prompt recognition and surgical intervention to prevent limb-threatening complications.

**Keywords:** Left ventricular myxoma • Cardiac tumor • Pediatric patient • Acute limb ischemia

## Introduction

Left ventricular myxomas are rare primary cardiac tumors that predominantly affect adults and are exceedingly uncommon in pediatric patients. These tumors arise from the endocardium and typically manifest as intracardiac masses attached to the atrial septum, most commonly in the left atrium. While left ventricular myxomas represent a small fraction of all cardiac tumors, they can have significant clinical implications due to their potential to obstruct blood flow, embolize, or cause arrhythmias. The presentation of left ventricular myxomas with acute lower limb ischemia is exceptionally rare, with only a few cases reported in the literature. Here, we present a case of a giant left ventricular myxoma causing acute lower limb ischemia in a pediatric patient and review the existing literature on this unusual presentation [1].

## Literature Review

Left ventricular myxomas are typically asymptomatic and may be incidentally detected on imaging studies performed for unrelated reasons. However, when symptomatic, left ventricular myxomas can present with a wide range of clinical manifestations, including dyspnea, chest pain, palpitations, syncope and signs of systemic embolization. Acute limb ischemia secondary to left ventricular myxoma obstruction of the left ventricular outflow tract is an exceedingly rare presentation, with only a handful of cases reported in the literature. The pathophysiology of acute limb ischemia in the setting of left ventricular myxoma involves obstruction of blood flow to the lower extremities due to mechanical compression of the aorta or iliac arteries by the tumor mass. In some cases, thromboembolism from the myxoma itself or associated atrial fibrillation may also contribute to acute limb ischemia. Prompt recognition and intervention are crucial to prevent limb-threatening complications and

minimize morbidity and mortality associated with acute limb ischemia. Surgical resection of the left ventricular myxoma is the cornerstone of management, aimed at relieving obstruction, restoring blood flow and preventing systemic embolization. In pediatric patients, surgical intervention may pose unique challenges due to smaller cardiac anatomy and limited tolerance for ischemia. However, timely surgical resection is essential to prevent irreversible tissue damage and preserve limb function [2,3].

## Discussion

The presented case of a giant left ventricular myxoma causing acute lower limb ischemia in a pediatric patient underscores the importance of considering rare etiologies in the differential diagnosis of acute limb ischemia, particularly in cases where conventional causes are not readily apparent. Left ventricular myxomas are uncommon cardiac tumors, especially in pediatric populations and their presentation with acute limb ischemia is exceptionally rare. However, prompt recognition and intervention are crucial to prevent limb-threatening complications and minimize morbidity and mortality associated with acute limb ischemia [4]. The pathophysiology of acute limb ischemia in the setting of left ventricular myxoma involves mechanical obstruction of blood flow to the lower extremities due to compression of the aorta or iliac arteries by the tumor mass. Additionally, thromboembolism from the myxoma itself or associated atrial fibrillation may contribute to acute limb ischemia. Timely surgical resection of the myxoma is paramount for relieving obstruction, restoring blood flow and preventing systemic embolization. In pediatric patients, surgical intervention may pose unique challenges due to smaller cardiac anatomy and limited tolerance for ischemia. However, urgent surgical resection is essential to prevent irreversible tissue damage and preserve limb function. Furthermore, this case highlights the importance of interdisciplinary collaboration between cardiologists, vascular surgeons and pediatric specialists in the management of complex cases involving cardiac tumors and acute limb ischemia. Close coordination among multidisciplinary teams is essential for timely diagnosis, risk stratification and treatment planning, particularly in pediatric patients who may require specialized care and interventions [5,6].

## Conclusion

In conclusion, the presented case illustrates a rare but clinically significant manifestation of left ventricular myxoma presenting with acute lower limb ischemia in a pediatric patient. While left ventricular myxomas are rare cardiac tumors, their presentation with acute lower limb ischemia poses significant

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diagnostic and therapeutic challenges, particularly in pediatric patients. Clinicians should maintain a high index of suspicion for cardiac tumors in the differential diagnosis of acute limb ischemia, particularly in cases where conventional etiologies are not readily apparent. Prompt recognition, imaging and surgical intervention are essential for optimizing outcomes and preserving limb function in patients with left ventricular myxoma-associated acute limb ischemia. Continued vigilance and interdisciplinary collaboration are crucial for ensuring timely diagnosis and appropriate management of rare cardiac tumors in pediatric populations.

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None.

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## Conflict of Interest

There are no conflicts of interest by author.

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