

CASE REPORT

POCUS A Valuable Tool In Early Detection Of Intracardiac Mass.

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ABSTRACT

A young patient presenting to the Emergency Department with chest pain may pose a diagnostic challenge. A wide range of differential diagnosis from life threatening to common causes needs to be ruled out. Even though rare, cardiac tumors or cardiac myxomas can present as a cause of chest pain in younger patients and it can be picked out with a high index of suspicion, utilization of bedside POCUS in all young patients presenting with chest pain to the emergency department and the management and definitive treatment can be planned out accordingly.

INTRODUCTION

Intracardiac tumors are rare¹. Cardiac Myxoma (CM), a form of primary intracardiac tumor, is mostly prevalent in adults aged above 50 with approximately 0.5/million population diagnosed per year². Further to clinical diagnosis, CM can only be confirmed using echocardiogram. Detection via bedside POCUS may prove critical in diagnosing any intracardiac tumors, enabling patients to seek early treatment³.

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CASE PRESENTATION

A 31-year-old patient presented with non-radiating prickling left-sided chest discomfort, a 5/10 pain score lasting less than 5 minutes along with heart palpitations. Initial physical examination showed no remarkable findings. ECG results showed Sinus Tachycardia, heart rate of 146 with no indication of myocardial injury. Vital signs were stable and patient was placed under cardiac monitoring. After 250ml bolus over 30 minutes, heart rate improved to 96 bpm. Upon reassessment, chest discomfort and palpitations resolved. On auscultation, the heart had skipped beats. Latest cardiac monitoring showed occasional premature ventricular contractions, which was initially absent. Bedside echocardiography showed good heart contractility, small pedunculated mobile mass seen near the mitral valve, no chamber dilatation and normal regional wall motion. Patient was admitted for close monitoring and investigation on the nature of the intracardiac mass.

DISCUSSION

Whenever an adult present to A&E with complaints of chest pain, the infamous life-threatening chest pain would be considered. Primary cardiac tumors (PCT) are rare, at only 0.0017-0.03% prevalence in reported autopsy case series⁴. 75% are benign and mostly Myxoma, occurring about 50% in women aged between 50-60. An ultra-structured analysis – added to an immunohistochemical investigation suggest that CM is likely derived from a pluripotent mesenchymal stem cell or sub-endothelial cell. CM are mostly pedunculated, solitary and arise primarily adjacent to the lamina of the fossa ovalis. Clinical observations indicate 75% of cases often develop in the left atrium, 18% in the right atrium and 3% in each ventricle. CM is mostly diagnosed via transthoracic and transesophageal echocardiography⁵. CMs may be unfamiliar to most medical practitioners resulting in misdiagnosis. Differential diagnosis should include intracardiac thrombus and other cardiac tumors. Even though rare, as highlighted in this case report, young patients with undifferentiated chest pain in the emergency department can still present with cardiac myxomas. A high index of suspicion and awareness is needed to prevent premature discharges of these patients. Utilization of POCUS-ECHO will help to prevent misdiagnosis and pick up a cardiac myxoma if present in the patient. This also shows that POCUS can be a safety netting in patients presenting with chest pain to the ED. Differential diagnosis of cardiac thrombosis must be entertained and specific features via TTE may be helpful but the patient may need further diagnostic investigations to confirm the diagnosis.

CONCLUSION

Young patients with no obvious explanation for chest pain are highly encouraged to undergo an echo as precautionary measures before being discharge.

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