E-ISSN 2250-0944
ISSN 2250-1150
doi: 10.48047/ijprt/16.02.382

Research Article

A CASE OF UNUSUAL PRESENTATION OF CARDIAC TAMPONADE – CLINICAL CASE REPORT

Feroz Khan[1*], Dr Zyad Saeed[2], Dr Pree Chetty[3]

[1*] Intensivist, Medclinic City Hospital, Dubai, UAE.
[2]Consultant ICU, Medclinic City Hospital, Dubai, UAE.
[3]Consultant Cardiothorasic Surgery, Medclinic City Hospital, Dubai, UAE.
Corresponding Author: Feroz Khan
Intensivist, Medclinic City Hospital, Dubai, UAE.
Received date: 10-08-2026, Date of acceptance: 14-08-2026, Date of Publication: 24-08-2026

Abstract

Cardiac tamponade is a medical emergency in which fluid or blood accumulates in the space between the heart and the sac that surrounds it, called the pericardium. This accumulation of fluid puts pressure on the heart and restricts its ability to pump blood effectively, leading to a potentially life-threatening condition. Some common causes of cardiac tamponade include trauma to the chest, heart surgery, cancer, infections, or autoimmune diseases. The symptoms of cardiac tamponade may include shortness of breath, chest pain, rapid heartbeat, low blood pressure, and fainting. A 53-year-old Male presented with chest pain for past few days on off with normal cardiac markers and ECG was sent back home, later in 10 days presented to ED with acute chest pain upon evaluation with Echo found to have pericardial effusion, within minutes of presentation in ED he dropped in BP near collapse. As the 2D ECHO shows some mass vs? clot extension from Right atrial cavity he was urgently shifted to OR under active resuscitation ongoing. This is a relative rare presentation of solid tumour infiltration across the wall of right atrium extending to the pericardial space. The active timely intervention from interdisciplinary team involving ED/ICU and Cardiac surgery preventing him from acute cardiac event and safely discharge from the Hospital.

Keywords: Cardiac tamponade / Atrial Tumour / Infiltration of pericardium.

INTRODUCTION

Most cases of pericardial effusion are caused by non-cancerous conditions, such as infections, autoimmune diseases, or heart failure. Pericardial effusion caused by tumours is a relatively rare condition, accounting for approximately 7-10% of all cases of pericardial effusion. Cardiac tumours are mostly secondary in origin, less than 5% of cardiac tumours are primary. Among the primary cardiac tumours most of them are benign 75%, Myomas being the most common seen in 50%, while as malignant tumours like sarcoma can rarely be seen as well[1]. Cardiac tamponade arising from malignancy is relative rare form of

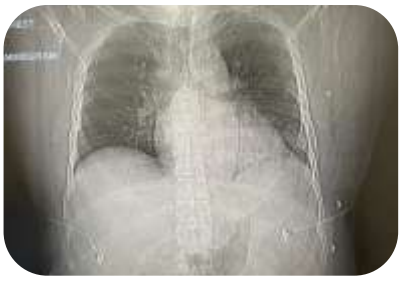
pericardial effusion. The prevalence of malignant pericardial effusion varies 1-20% most primary is from Lung.

CASE DESCRIPTION

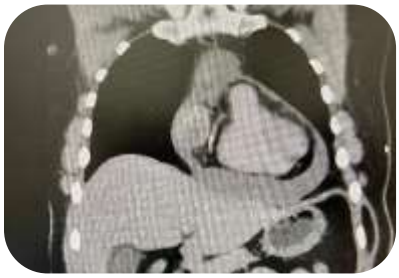
A 53-year-old male brought from DCAS with acute chest pain score started as 5/10 to 10/10 as he reached ED, pain radiating right side of neck worse on lying down and with deep breathing relieved with bending forward. His past medical history includes HTN/CKD stage 1/IHD. Clinical examination profusely diaphoretic male with recorded low blood pressures heart sounds decreased intensity with borderline raised JVP increasing lactate suggestive of SHOCK ?Cardiogenic. Recent history shows he has chest pain frequently since >2 months on off evaluated with cardiac markers and ECG nil significant treated conservatively.

Urgent bedside 2D Echo shows as significant pericardial effusion more inferior and posteriorly with right atrial collapse, D dimers elevated as well. Bedside CXR shows widened mediastinum and cardiothoracic ratio. There is no adequate response to fluid resuscitation hence started on inotropes and shifted for urgent CT scan done to rule out PE vs Pericardial tamponade.

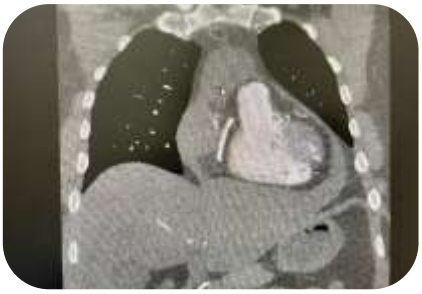
CT shows lobulated mixed density area adjoining right atrium 40*30mm with surrounding fluid, angiogram phase shows extravasation of fluid, in delayed phase the area is hypodense to pericardial fluid? haematoma vs atrial mass.



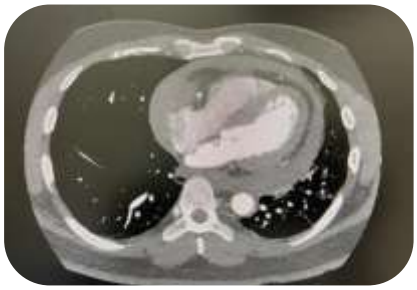
Widening mediatinum



Extravasation of contrast into pericardial space with effusions



Pericardial effusion



Right atrial mass illdefined with effusions

Urgent consultation with Cardiac surgeon, advised to be taken to OR urgently for possible Emergency initial pericardiostomy leading to resection of Large cardiac tumour under bypass. Intra operative finding shows Massive tamponade >1000 ml of frank blood in pericardial sac, large tumour almost entire right atrial wall SVC to IVC & Right auricle to Inter atrial groove. Complete excision of tumour and reconstructive surgery with bovine pericardium done. As seen intraoperatively the tumour eroded the RA wall into pericardium causing the free blood in pericardium leading to tamponade upon presentation to ED.

The postoperative period was good extubated early, drains removed, no complications recovery was good shifted to surgical ward.

DISCUSSION

Cardiac tumours can be classified based on their location, histology, and whether they are primary or secondary[2]. Primary cardiac tumours originate from the tissues within the heart itself. They are relatively rare and can be benign or malignant. The most common primary cardiac tumour is a myxoma[1], which accounts for approximately 50% of all cases. Cardiac tumours can sometimes lead to the development of pericardial effusion- includes Myoma, Sarcoma and metastatic tumours[4] are those spread to the heart from other parts of the body can also cause pericardial effusion. Common cancers that can metastasize to the heart include lung cancer, breast cancer, and melanoma.

Sarcomas are malignant tumours that can occur in the heart or the pericardium. They are relatively rare but can be aggressive and cause significant damage to the heart. Sarcomas can cause pericardial effusion by invading the pericardium and causing inflammation[3].

Angiosarcoma of heart are more commonly located in right atrium[5], predominantly in male as compared to females. Angiosarcoma of the heart is difficult to diagnose because

its symptoms are often vague and nonspecific as seen in our case has chest pain negative troponin. The treatment of angiosarcoma of the heart typically involves a combination of surgery, chemotherapy, and radiation therapy.

Surgery[6] is often necessary to remove as much of the tumour as possible, although complete removal is often not possible due to the tumour's location and aggressive nature as seen in our case its located near the RCA where the excision was not possible. Chemotherapy and radiation therapy may be used to shrink the tumour and kill any remaining cancer cells.

The prognosis for angiosarcoma of the heart is poor, with a median survival time of less than one year. The tumour is often diagnosed at an advanced stage, and its aggressive nature makes it difficult to treat effectively. However, early detection and treatment may improve the chances of survival[7].

CONCLUSION

Cardiac tumours are relatively rare with nonspecific presentations. In our case of sarcoma of the right atrium invading the atrial wall leading to tamponade is relatively rare but many case reports have been made. Its aggressive nature and location of tumour with unable to achieve clear margins as in our case due to proximity to RCA and the metastatic nature of tumour itself makes overall prognosis and survival low[1].

REFERENCES

1. Butany J, Nair V, Naseemuddin A, Nair GM, Catton C, Yau T. Cardiac tumours: diagnosis and management. Lancet Oncol 2005;6:219–228.
2. The 2021 WHO Classification of Tumours of the Heart(open source).
3. Orlandi A, Ferlosio A, Roselli M, Chiariello L, Spagnoli LG. Cardiac sarcoma. An update. *J Thorac Oncol.* 2010;5:1483–1489. doi: 10.1097/JTO.0b013e3181e59a91.
4. Coakley M., Yeneneh B., Rosenthal A., Fonseca R., Mookadam F. Extramedullary cardiac multiple myeloma-a case report and contemporary review of the literature. *Clin Lymphoma Myeloma Leuk.* 2016;16:246–252.
5. Patel SD, Peterson A, Bartczak A, Lee S, Chojnowski S, Gajewski P, Loukas M. Primary cardiac angiosarcoma—a review. Med Sci Monit 2014;20:103–109.
6. Bouma W, Lexis CP, Willems TP, Suurmeijer A, van der Horst I, Ebels T, Mariani MA. Successful surgical excision of primary right atrial angiosarcoma. J Cardiothorac Surg 2011;6:47.
7. Look Hong NJ, Pandalai PK, Hornick JL, Shekar PS, Harmon DC, Chen Y-L, Butrynski JE, Baldini EH, Raut CP. Cardiac angiosarcoma management and outcomes: 20-year single-institution experience. Ann Surg Oncol 2012;19:2707–2715.