Uncommon Presentation of a Common Disease

BabuRaj P, Anand R, Harikrishnan B L

Department of General Medicine Jubilee Mission Medical College & Research Institute, Thrissur*

ABSTRACT

Published on 30h March 2016

Purulent pericarditis has become uncommon in the developed world due to widespread antibiotic use. It usually presents with acute cardiovascular decompensation and features of sepsis. Tuberculosis as a cause of pyopericardium is rare even in high prevalence areas. We report here an unusual cause of pyopericardium which presented as prolonged fever and finally turned out to be due to mycobacterium tuberculosis and 6 month course of anti tuberculous therapy resulted in complete recovery without any sequelae

Keywords: Prolonged fever, Pyopericardium, Mycobacterium tuberculosis

*See End Note for complete author details

INTRODUCTION

Pyopericardium usually results from contiguous spread from lungs, intra cardiac causes and lymph nodes, thoracic surgeries and as a part of systemic bacteremia. Pyopericardium is an uncommon presentation of tuberculosis (TB) and reported in 6.98% cases of pyopericardium.[1] It has been documented in less than 3% cases of large TB pericardial effusions even in high prevalence areas of TB and human immunodeficiency virus (HIV) infection.[2] Involvement of pericardium usually occurs through retrograde lymphatic spread of TB from peritracheal, peribronchial and mediastinal lymph nodes.

CASE REPORT

40 year old female was referred to us with prolonged fever of 1 month duration. She also gave history of dry cough. She had a family history of tuberculosis.

On Examination she had stable vitals, Enlarged cardiac dullness, JVP was not raised, and Respiratory system was clinically within normal limits. There was no significant lymph node enlargement.

Routine investigations were fairly normal except for a raised ESR of 60 mm /1 st hr. Mantoux was strongly positive. Sputum examination was negative for AFB. Chest X ray PA showed enlarged cardiac silhouette with stencilled heart borders suggestive of pericardial effusion.[2] D echocardiogram showed 4 *10 cm sized fluid filled mass anterior to RV with extrinsic compression of RA and RV suggestive of pericardial effusion. CT Thorax confirmed the presence of a large pericardial effusion. It also detected a fibrotic lesion in the upper lobe of the Right lung.

Pericardiocentesis yielded about 300 ml of frank pus. **(Table 1)** The biochemical analysis of the fluid showed neutrophil predominant leucocytosis with low sugar, high protein and raised ADA and LDH levels. The cytology of the same showed suppurative material with features of Granulomatous inflammation suggestive of tuberculosis. The gram stain of the pus showed numerous polymorphs. The fluid culture was sterile and negative for AFB.

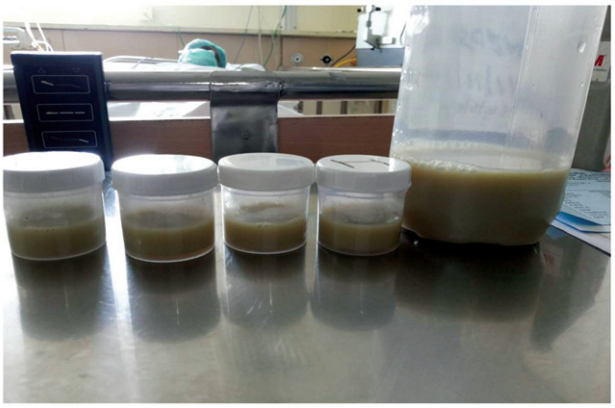

Figure 1. **Pericardiocentesis showing frank pus**

Cite this article as: BabuRaj P, Anand R, Harikrishnan BL. Uncommon Presentation of a Common Disease. IMA Kerala Medical Journal. 2016 Mar 30;9(1):43-44

Corresponding Author:
Dr BabuRaj P, Professor and Unit Chief , Department of General Medicine Jubilee Mission Medical College & Research Institute, Thrissur. E-mail: drbaburajp@yahoo.co.in

Table 1. Pericardial Fluid Analysis

Test	Result
TC	900 cells/cu mm
DC	N86 L14
Protein	6.72 g/dl
Sugar	10 mg/dl
ADA	11510u/l
LDH	156.1u/l

DIAGNOSIS AND TREATMENT

A final diagnosis of tuberculosis presenting as pyopericardium was made in view of a positive family history, positive Mantoux, Right lung upper lobe fibrosis and pericardial fluid showing high ADA and features of granulomatous inflammation. She was put on a 6 month course of antituberculosis therapy and recovered completely without any sequelae.

DISCUSSION

Pericarditis is a common disorder that has multiple causes and presents in various clinical settings.3 Purulent pericarditis or pyopericardium is diagnosed when pus is drained from the pericardial space or when bacteria are cultured from the pericardial fluid.[4] Direct extension from pneumonia or empyema accounts for majority of cases but haematogenous spread during bacteremia, thoracic surgery and trauma can also cause pyopericardium.

Pericardial TB is usually an insidious illness and may present as acute pericarditis, chronic pericardial effusion, cardiac tamponade or pericardial constriction but purulent pericarditis is rare. Two cases of tuberculosis presenting as pyopericardium has been reported in the literature by Gowrinath et al and Narasimham et al respectively.[5,6]

In case of pericardial effusion, TB as the aetiological cause can be established through demonstration of AFB in smear or culture of pericardial fluid or pericardial biopsy specimen and histologic examination of pericardial biopsy specimen revealing caseating granulomatous inflammation. The diagnostic yield of AFB from smear and culture of pericardial fluid is variable and was 53% with conventional culture method using LJ medium and increased upto 75% with prompt bedside culture in double strength liquid medium of Kirchner. High ADA levels in the fluid are also a pointer.

Purulent pericarditis or pyopericardium is an emergency condition which, when untreated, progresses to constrictive pericarditis or cardiac tamponade where the prognosis is usually fatal. This rare disease is often diagnosed late, when severe hemodynamic compromise develops due to pericardial tamponade.[7]

The case is reported for its rarity and possible clinical outcome.

END NOTE

Author Information

1. Prof. Dr BabuRaj P, Professor and Unit Chief , Department of General Medicine Jubilee Mission Medical College & Research Institute, Thrissur
2. Dr Anand R, Senior Resident, Department of General Medicine Jubilee Mission Medical College & Research Institute, Thrissur
3. Dr Harikrishnan B L, Assistant Professor, Department of General Medicine Jubilee Mission Medical College & Research Institute, Thrissur

Conflict of Interest: None declared

REFERTENCES

1. Lema LE. Surgical management of pyopericardium. East Afr Med J. 1993 Mar;70(3):140-2.
2. Louw VJ, Reuter H, Smedema JP, Katjitae I, Burgess LJ, Doubell AF. Clinical experience with pericardiocentesis and extended drainage in a population with a high prevalence of HIV. Neth Heart J. 2002 Oct;10(10):399-406.
3. Troughton RW, Asher CR, Klein AL. Pericarditis. Lancet. 2004 Feb 28;363(9410):717-27.
4. Rubin RH, Moellering RC. Clinical, microbiologic and therapeutic aspects of purulent pericarditis. Am J Med. 1975 Jul;59(1):68-78.
5. M.V. Narasimham, Susmita Kumari Sahu, Indrani Mohanty, Muktikesh Dash, Pritilata Panda and Banojini Parida. Pyopericardium due to infection with mycobacterium tuberculosis -a rare case report. Indian J Tuberc 2013; 60: 118 - 120
6. Gowrinath K, Phani Krishna B, Raghavendra C, Sai Ravi Shankar A. Unusual cause of pyopericardium with tamponade. J Clin Sci Res 2015;4: 61-4.
7. Farhat F, Dubreuil O, Durand P-G, Jegaden O. Constrictive pericarditis following a pyopericardium due to Staphylococcus aureus. Interact Cardiovasc Thorac Surg. 2003 Dec;2(4):626-8.