International Journal of Integrated Medical Research
Volume 10 Issue 03 July-August-September 2023
https://doi.org/10.57181/ijoimr/vol10i03/122
ISSN (Online): 2393-9869, ISSN (Print): 2350-0360

CASE REPORT

AN UNUSUAL CASE OF HEMORRHAGIC FILARIAL PERICARDIAL EFFUSION PRESENTING AS CARDIAC TAMPONADE

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ABSTRACT

Filariasis presenting as pericardial effusion with cardiac tamponade is rare. We report a case of 34-year-old male who presented with a short history of fever, bilateral pedal edema and left sided chest discomfort of 10 days duration. On evaluation he was found to have pericardial effusion. Extensive work up to evaluate routine causes of pericardial effusion was unremarkable. His pericardial fluid showed microfilaria, however there was no microfilariae in peripheral blood smear. He was managed with pericardiocentesis and 04 weeks of Albendazole, diethylcarbamazine to which he responded. In the tropics filarial pericardial effusion should always be considered in cases of pericardial effusion of unknown etiology.

KEYWORDS: Hemorrhagic Filarial, Cardiac Tamponade.

INTRODUCTION

Lymphatic filariasis is endemic in tropics and most infections are caused by Wuccheria Bancrofti.[1] There are approximately 60 million people infected in the south Asian region and approximately 31 million people have the clinical manifestation of this disease[2] These filarial antigens affect the lymphatic system, skin and eyes. Rarely they may be associated with pleura and pericardial involvement.[3]Patients in an acute setting may present with fever, Aden lymphangitis and orchitis. Lymphedema and hydrocele are chronic manifestations[4].Pericardial effusion is a common clinical entity. However, parasites causing pericardial effusion is rare. This case is uncommon as filariasis presented with filarial pericardial effusion and cardiac tamponade without any haematological manifestations or any overt clinical symptoms or signs suggestive of the primary disease. The patient responded to pericardiocentesis and 04 weeks of Albendazole, Diethyl carbamazine and 04 weeks of Doxycycline. The patient is asymptomatic on regular follow ups.

CASE REPORT

34-year-old, daily wage labourer without any comorbidities presented with fever of 03 days duration, bilateral pedal edema and left sided chest pain of 10 days duration. He gave a history of non-productive cough for 2 months and occasional episodes of orthopnoea denied any history of jaundice, reduced urine output, frothy urine, nocturia, seasonal or postural variation of cough. No associated GI symptoms or periorbital swelling. No history of abdominal distension. He did not give any history of any other localizing symptoms for fever. No history of angina, palpitations. Patient was admitted to a hospital 4 months back with history of dysnoea and lower limb swelling of 07 days duration. He was given some medications for two weeks (documents not available during the present admission), showed improvement however got readmitted following recurrence of symptoms.

CLINICALLY

On admission-Pallor+, bilateral pedal edema+, JVP-raised, no lymphadenopathy

BP-94/60 mm Hg,Pulse 96/min ,Pulsus paradoxus +, afebrile

Systemic examination

Heart sounds- *Muffled*

Chest-decreased breath sounds R>L axillae

PA-Soft, non-tender, no organomegaly

On evaluation-

He had iron deficiency anemia and raised ESR/CRP. Liver and renal parameters were normal.

Blood culture –did not reveal any growth. Sputum analysis-unremarkable

ECG –Low voltage complexes. Trop I-Neg

CXR-cardiomegaly with pleural effusion and blunting of cardio phrenic angles.2D echo was done which showed pleural and pericardial effusion. Work up to rule out common causes of pericardial effusion in the form of RF, ANA,thyroid profile, viral markers was unremarkable. CT Chest showed bilateral pleural and pericardial effusion.

Pleural fluid analysis-Exudative, ADA 12, Negative for malignancy/AFB

Pericardial fluid analysis- Exudative, ADA -07, positive for microfilariae, Neg for AFB/malignancy, RBCs ++

Patient was subsequently managed by therapeutic paracentesis. Approximately 550 ml of haemorrhagic pericardial fluid was removed. He was then given a stat dose of tab Ivermectin and was given 04 weeks of Albendazole and Diethyl carbamazine and 04 weeks of Doxycycline. The patient responded to this treatment with complete resolution of clinical and radiological parameters. Patient is doing well and is on regular follow up for 04 months.

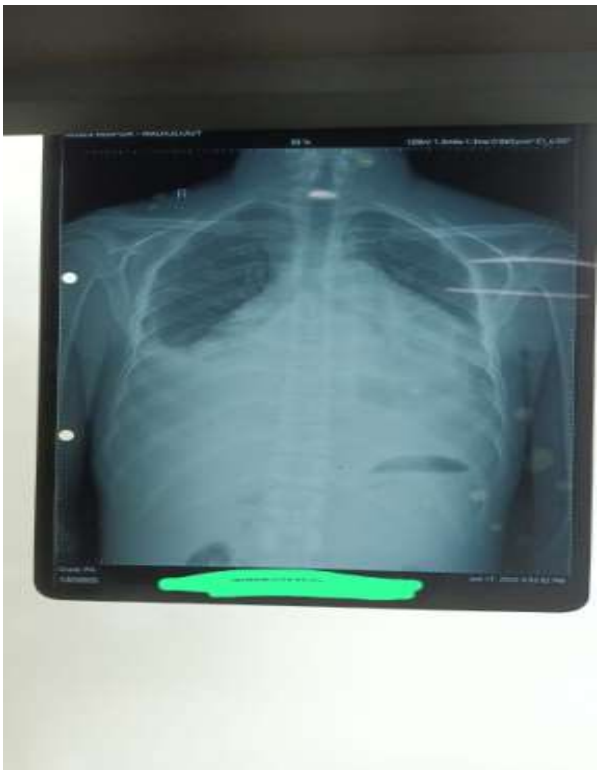

FIGURE A - CXR- Cardiomegaly, Pleural Effusion

FIGURE B- Haemorrhagic Pericardial Fluid

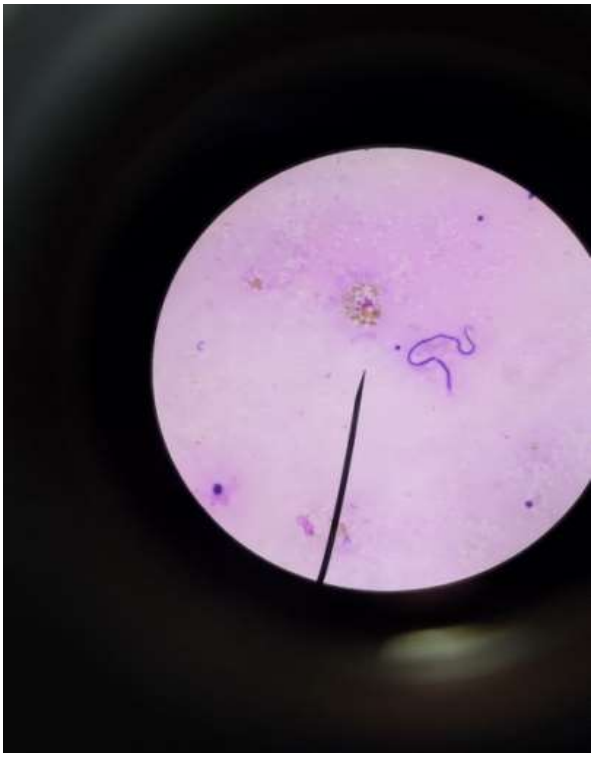

FIGURE C- Microscopy of Pericardial Fluid Shows Microfilariae

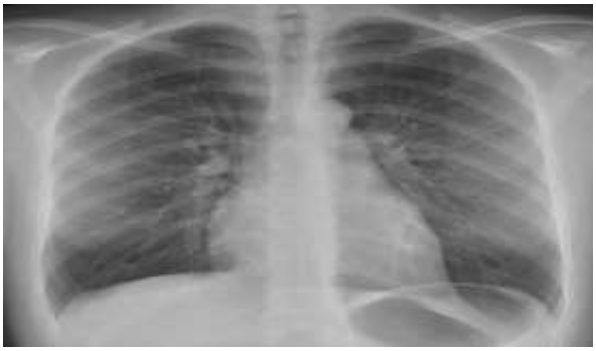

FIGURE D- Complete Resolution of Effusion on Follow Up After 04 Weeks

DISCUSSION

Pericardial effusion is most commonly associated with inflammatory disorders, neoplastic ethology, Viral infections, lymphoproliferative disorders, Tuberculosis, Post myocardial infarction and hypothyroidism. Filarial pericardial effusions are rare entities and there are only few case reports published in the literature. Mukherjee et al[5] reported a case of pneumopericardium effusion in 1963 with microfilariae detected in both in blood and pericardial fluid. He responded to diethylcarbamazine for 06 weeks. Another case of filarial pericardial effusion was reported by Sinha et al. in 1971[6].Pericardial fluid analysis showed microfilariae in pericardial fluid but blood smears were negative. He was given diethylcarbamazine for 06 weeks and the patient improved. Samantray et al.[7] in 1975 reported a case of filarial pericardial effusion who received 06 weeks of DEC therapy and recovered completely. Another case of filarial pericardial effusion was reported by Chakrabarty et al. This patient received 150 mg DEC for 04 weeks. Initially he had clinical recovery but later developed constrictive pericarditis[8].Our patient was admitted at a different hospital 04 months back with similar symptoms in the form of bilateral pedal edema and shortness of breath following which he was managed with some medication and discharged. In the present admission microfilariae was isolated from pericardial fluid. Documents of past admission was not available but considering the similarity of symptoms during both the admissions it may be inferred that he is a case of recurrent filarial pericardial effusion who presented this time with relapse because of inadequate treatment in the first admission. Peripheral blood smears may be negative for Mf in cases of secondary manifestations of filariasis [9.] A case of recurrent haemorrhagic filarial pericardial effusion was published by Santosh et al[10].This patient responded to treatment with Ivermectin and albendazole. Our Patient was managed with single dose of ivermectin and 04 weeks course of albendazole, diethyl carbamazine and 04 weeks of doxycycline.[11]The patient is doing well and is asymptomatic on regular follow up for 04 months.

CONCLUSION

Though rare, tropical infections should be considered in etiological work up of pericardial effusion. On the basis of existing literature, we can infer that few cases of recurrent pericardial effusion can be filarial in origin. Diethyl carbamazine does not act on microfilaria in lymphatics. As mentioned in the literature and also as observed in our patient the combination therapy of Diethylcarbamazine ,albendazole and Ivermectin has shown good response.

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