

Microfilaria in malignant pericardial effusion - rare incidental finding: a case report

Bhagya Lakshmi A, Satya Sri K, Ch Nirmala

1. Professor & Head, Department of Pathology, Andhra Medical College, Visakhapatnam, A.P, India
2. Assistant Professor of Pathology, Department of Pathology, Andhra Medical College, Visakhapatnam, A.P, India
3. Civil Assistant Surgeon, Govt. Hospital for Mental Care, Visakhapatnam, A.P, India

✉ **Correspondence to:** Dr. A. Bhagya Lakshmi; Professor & Head, Dept. of pathology, Andhra Medical College, Visakhapatnam – 530 002, Andhra Pradesh, India

Publication History

Received: 07 November 2014

Accepted: 14 December 2014

Published: 17 December 2014

Citation

Bhagya Lakshmi A, Satya Sri K, Ch Nirmala. Microfilaria in malignant pericardial effusion - rare incidental finding: a case report. *Medical Science*, 2014, 15(60), 25-27

ABSTRACT

Incidental finding of microfilaria in effusions is documented. We present a case of rare incidental finding of microfilaria in malignant pericardial effusion in 55 yrs old lady who was brought to the intensive coronary care unit with sudden onset of breathlessness. 2D Echo revealed massive pericardial effusion. Pericardiocentesis done and fluid sent for examination. Wet and dry films showed adenocarcinoma deposits with microfilaria.

Key words: Malignant pericardial effusion, Adenocarcinoma.

1. INTRODUCTION

Pericardial fluid constitutes less than 1% of serous fluids examined for malignant as well as non-malignant diseases [Zipf RE et al., 1972]. Filariasis is a major public health problem in tropical countries like India with *Wucheraria Bancroftii* being the most common filarial infection accounting for about 95% of the total filarial infections [Gupta S et al., 2001]. Microfilarial worms have been reported in various effusions along with adenocarcinomatous deposits but to the best of our knowledge very few cases of microfilaria in association with adenocarcinoma deposits in pericardial effusion has been documented. We report a case of microfilariaeworms with adenocarcinoma deposits in pericardial fluid.

2. CASE REPORT

A 55 year old lady was brought to the ICCU of our hospital with severe dyspnoea and palpitation. The 2D echo showed massive pericardial effusion. Pericardiocentesis was done and about 200ml of hemorrhagic fluid sent for cytological examination. The fluid was subjected for both wet and dry smears. Wet fluids showed large clusters of pleomorphic malignant cells amidst which a number of sheathed microfilariae were observed. H&E stained smears showed highly cellular smears with pleomorphic malignant cells arranged in groups, acinar pattern and scattered singly (Figs 1-3). Individual malignant cells have pale eosinophilic cytoplasm, atypical hyperchromatic nuclei with foci of prominent nucleoli in some. Along with these tumor cells were noted sheathed micro-filariae of *W.Bancrofti* having multiple coarse, discrete nuclei extending from the head to tail, except in the small terminal portion of the caudal end. Based on the above findings a diagnosis of metastatic deposits from adenocarcinoma alongwith micro-filariae of *W.Bancrofti* was offered. The peripheral blood smear didnt reveal any micro filariae. CECT revealed a mass lesion in the upper lobe of left lung. After acute exacerbation subsided, biopsy of lung lesion was done, which confirmed to be adenocarcinoma. All other investigations were with in normal limits. We could follow up the case for one month only as the patient was discharged against medical advice.

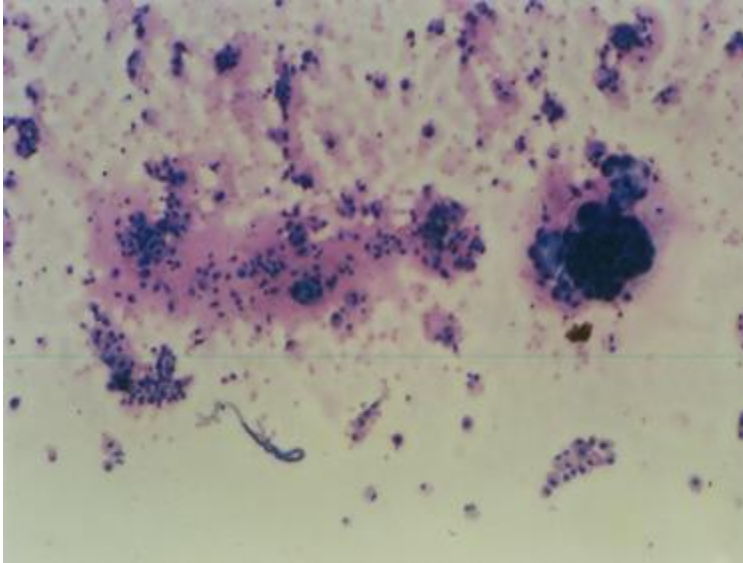


Figure 1
Malignant pericardial effusion with sheets of malignant cells with microfilaria.(H & E :40 X)

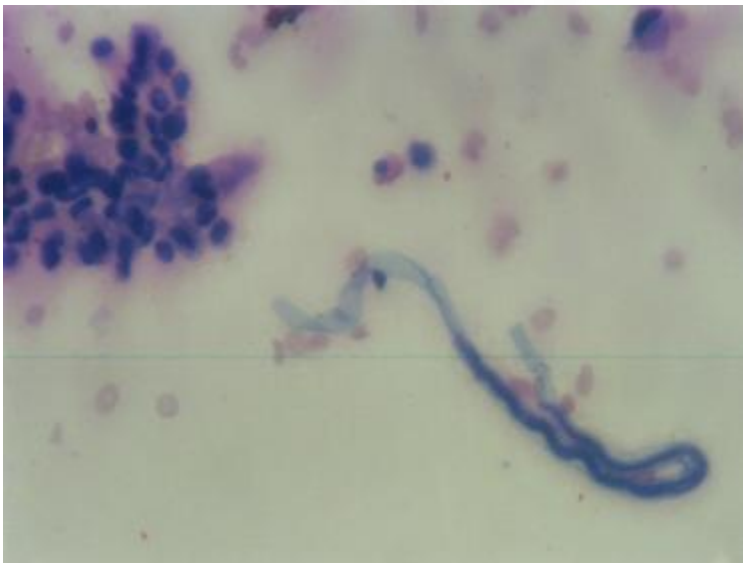


Figure 2
Microfilaria with sheets of malignant cells. (H &E :100 X)

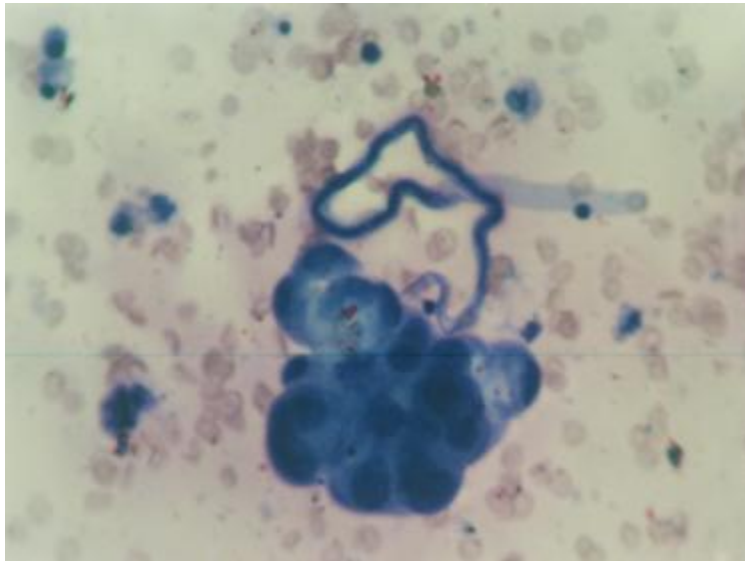


Figure 3

Sheets of pleomorphic malignant cells with pale eosinophilic cytoplasm and eccentrically situated hyperchromatic nuclei in red cell background. (H & E :100 X)

3. DISCUSSION

The presence of tumor cells in the pericardium leads to a hemorrhagic pericardial effusion and cardiac tamponade [MC Manus BN et al., 1995]. Positive cytology exposes an undiagnosed malignancy and suggests whether it is epithelial or non-epithelial. In our case, the patient was investigated after the effusion showed an adenocarcinoma deposits and a mass lesion was found in lung. Filariasis is a global problem and majority of infected individuals in filarial endemic communities are asymptomatic. Despite high incidence it is infrequent to find micro filariae in FNAC, smears and body fluids, more so in pericardial fluid [Sumantaray SK. et al., 1975]. The disease is endemic all over India[Walter A et al.,1983,Park K,2005] .Walter etal suggested that microfilariae appear in tissue fluids and exfoliated surface material due to lymphatic or vascular obstruction and subsequent extravasation. The finding of microfilariae in pericardial fluid in our case is an incidental finding in association with metastatic adenocarcinoma deposits, and the patient was harboring sub-clinical filariasis when the tumor metastasized. Nomicrofilariae were detected in the peripheral smear. This case highlights the importance of screeningsmears for parasites even in the absence of clinical symptoms particularly in endemic areas. Co-existence of micro filariae with secondary deposits of adenocarcinoma is very rare and hence the case is reported.

REFERENCES

1. Gupta S, Sodhani P, Jain S, Kumar N Microfilaria in association with neoplastic lesion report of five cases. *Cytopathology*. 2001; 12(2):120-6.
2. MC Manus BN, Davies MJ. Heart disease in adults in *Basic Andersons Pathology* Eds.Damjanov I, Linder J, 10th ed. Newyork Mosby 1995; 1:1256-1338.
3. Park K, Parks Text book of Preventive and Social medicine 18th ed. Jabalpur India. M/s Banarasidas Bharat Publisher 2005, 211-16.
4. Sumantaray SK., PulimoodBM. Filarial pericardial effusion. *J.AssPhyInd*. 1975; 23:349-351
5. Walter A,Krishnaswami H, Cariappa A – Microfilariae of *W.bancrofti* in cytologic smear. *ActaCytol*. 1983; 27:432-436.
6. Zipf RE, Johnston WW. The role of cytology in the evaluation of pericardial effusion. *Chest*, 1972; 62(5) 593-96.