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## An Uncommon Presentation of Filariasis

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**Abstract:** Filariasis is a common healthcare problem in Tropical countries caused by nematodes of the order Filariidae. Typical clinical manifestations include a subclinical syndrome, Acute adenolymphangitis (ADL), Filarial fever (characterized by fever without associated adenitis) and Tropical pulmonary eosinophilia (TPE). Unusual manifestations include a subcutaneous nodule, filariasis of breast, lymphadenovariex in the axilla and others. Massive hemorrhagic pericardial effusion due to Filariasis is rare. Diethylcarbamazine is the treatment of choice.

**Keywords:** Filariasis; Pericardial effusion; Diethylcabamazine.

### 1. Introduction

Filariasis is a disease group affecting humans and animals, caused by filariae; i.e., nematode parasites of the order Filariidae. Of the hundreds of described filarial parasites, only 8 species cause natural infections in humans. These include *Wuchereria bancrofti*, *Brugia malayi*, and *Brugia timori*, *Loa loa*, *Onchocerca volvulus*, and *Mansonella streptocerca*, *Mansonella perstans* and *Mansonella ozzardi*. Based on the predominant organ involvement these are classified into three groups: cutaneous group, lymphatic group and body-cavity group. The parasites of the cutaneous and lymphatic groups are the most clinically significant. Typical clinical manifestations include a subclinical syndrome, Acute adenolymphangitis (ADL), Filarial fever and Tropical pulmonary eosinophilia (TPE) [1-3] Unusual manifestations include a subcutaneous nodule, Filariasis of breast, lymphadenovariex in the axilla and others. Onchocerciasis is characterized by hanging groins, leopard skin and river blindness whereas Loiasis presents as subcutaneous swellings on the extremities, localized pain, pruritus and urticaria. Massive pericardial effusion due to Filariasis is rare. We here present a patient who presented to us with symptomatic hemorrhagic pericardial effusion that was proved to be caused by Filariasis.

### 2. Case Report

A 26 year old male, resident of West Bengal, presented to the Emergency Department of our hospital with complaints of fever and progressive breathlessness of one month duration with recent worsening. Patient did not give any history of cough, sputum production, chest pain, loose motions or dysuria. However there was recent history of travel to his native place. On general physical examination, patient had tachypnea, tachycardia and fever (101<sup>0</sup>F). His cardiovascular examination revealed muffled heart sounds whereas abdominal examination revealed moderate hepatomegaly. His respiratory and neurological examinations were normal. Patient was admitted and put on broad spectrum antibiotics and other supportive treatment. Blood investigations were normal (Table 1). X ray chest revealed an enlarged cardiac silhouette (Fig 1). Electrocardiogram revealed low voltage complexes. Echocardiogram revealed massive pericardial effusion with evidence of impending cardiac tamponade (Fig 2). Therapeutic and diagnostic pericardiocentesis was done. Pericardial fluid showed lymphocytic pleocytosis with numerous microfilaria (Fig 3). Gram stain or AFB stain didn't reveal any microorganisms. Peripheral blood was negative for microfilariae. Patient was put on Diethylcarbamazine (100 mg tid for 21 days). Patient improved significantly and his fever and breathlessness resolved. Patient is presently on our follow up and is doing fine.

### 3. Discussion

Lymphatic Filariasis is a common public health problem of tropical and subtropical countries. Chowdhary, *et al.* [4] It is transmitted by the Culex mosquito and is caused by two closely related nematodes, W. bancrofti and Brugia malayi, which are responsible for 90% and 10% of the cases, respectively. The adult worm resides in lymphatic vessels, while the larval forms, microfilariae, circulate in the peripheral blood. Pericardial effusion is an uncommon manifestation of Filariasis. Chylous serous effusions may occur in Filariasis. However, hemorrhagic effusions are very rare in Filariasis and are usually suggestive of malignancy. The portal of entry of microfilariae to the pericardial space is still not known. Microfilariae probably appear in tissue fluids due to lymphatic or vascular obstruction by scars or tumours, extravasation or damage to vessel walls by inflammation, trauma or stasis. Munish, *et al.* [5] reported a case of Filarial Pericardial Effusion causing cardiac tamponade which subsequently resolved with treatment with pericardiocentesis and Diethylcarbamazine (DEC). Prasanthi, *et al.* [6] reported a case of unresolving pericarditis that was found to be due to microfilariasis and that resolved with antihelminthic drugs. Paul [7] Peripheral blood smears may be negative for Mf in cases of secondary manifestations of Filariasis. Our patient also presented with massive pericardial effusion with impending tamponade secondary to Filariasis that resolved with Diethylcarbamazine and pericardiocentesis.

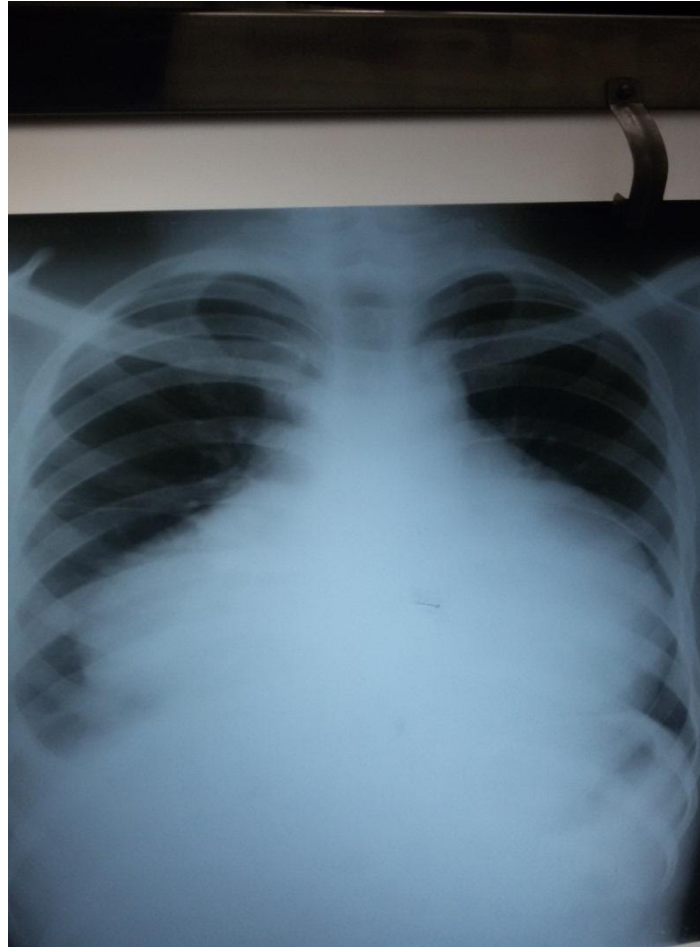
### 4. Conclusion

In conclusion, microfilariasis should be considered as a cause of pericardial effusion in persons residing in endemic areas, in migrants from areas endemic for Filariasis and in visitors to endemic areas. Treatment is Diethylcarbamazine.

### References

- [1] Arvindbhai, G., Bhanumati, S., Yoganand, V., and Lalita, G., 2007. "Subcutaneous filariasis: An unusual case report." *Indian Journal of Dermatology*, vol. 52, pp. 48-49.
- [2] Bhattacharjee, K., Ray, P., and Halder, S., 2012. "Filariasis of breast: An unusual presentation." *Ann Trop Med Public Health*, vol. 5, pp. 376-378.
- [3] Adhish, B., Sarath, C., Surendra, K., and Jagdish, S., 2006. "Lymphadenovarix in the axilla – an unusual presentation of Filariasis." *Filaria Journal*, vol. 5, p. 9.
- [4] Chowdhary, M., Langer, S., Aggarwal, M., and Agarwal, C., 2008. "Microfilaria in thyroid gland nodule." *Indian J Pathol Microbiol*, vol. 51, pp. 94-96.
- [5] Munish, S., Dinesh, G., and Sujata, J., 2014. "Case of filarial pericardial effusion (pe) presented as cardiac temponade which subsequently resolved with treatment with pericardiocentesis and diethylcarbamazine." *Journal of Indian College of Cardiology*, vol. 4, pp. 233-235.
- [6] Prasanthi, K., Nagamani, K., and Saxena, K., 2010. "Unresolving pericarditis: Suspect filariasis in the tropics." *Indian J. Med. Microbiol*, vol. 28, pp. 73-75.
- [7] Paul, C., 1969. "Filariasis without Microfilaremia. Presidential Address." *The American Society of Tropical Medicine and Hygiene, Washington, D.C.*, pp. 181-189.

**Figure-1.** Xray Chest showing enlarged cardiac silhouette suggestive of pericardial effusion.



**Figure-2.** Echocardiogram of the patient showing massive pericardial effusion (arrow)



**Figure-3.** High Power microscopy demonstrating microfilariae



**Table-1.** Investigations

| Parameter | Result                                       | Parameter     | Result     | Pericardial Fluid Analysis |                             |
|-----------|----------------------------------------------|---------------|------------|----------------------------|-----------------------------|
|           |                                              |               |            | Parameter                  | Result                      |
| Hb        | 11 g%                                        | Urea          | 28 mg/dl   | TLC                        | 8000 cells/mm <sup>3</sup>  |
| TLC       | 8200/mm <sup>3</sup>                         | Creatinine    | 1.3 mg/dl  | Cell Type                  | Lymphos=70%<br>Neutros= 10% |
| DLC       | Neutros=70%<br>Lymphos=21%<br>Eosinophils=5% | Bilirubin     | 1.45 mg/dl | Glucose                    | 63 mg/dl                    |
| PLT       | 3 lacs/mm <sup>3</sup>                       | ALT           | 54 U/L     | Protein                    | 6.52 g/dl                   |
| MCV       | 79fL                                         | AST           | 56 U/L     | AFB                        | Not Found                   |
| MCH       | 25.9                                         | ALP           | 128 U/L    | ADA                        | 143 U/L                     |
| ESR       | 42 mm/1st hour                               | Total Protein | 6.76 g/dl  |                            |                             |
|           |                                              | Albumin       | 3.8 g/dl   |                            |                             |