CASE REPORT

Hemorrhagic Pericardial Effusion In Filariasis An Uncommon Presentation Of Filariasis

Waseem Raja Dar, M.D.,¹ Najeebullah Sofi, M.D.,²
Imtiyaz Ahmad Dar, M.D.,³ Muzamil Latief, M.D.,⁴ Pervez Sofi⁵

¹Department of Internal Medicine, Sanjeev Bansal Cygnus Hospital

²Department of Internal Medicine, Rockland Hospitals

³Department of Internal Medicine, Advanta Hospital

⁴Department of Internal Medicine, Mulana Medical College

⁵Department of Critical Care Medicine, Sanjeev Bansal Cygnus Hospital

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, lymphadenovari in the axilla and others. Massive hemorrhagic pericardial effusion due to Filariasis is rare. Diethylcarbamazine is the treatment of choice. JMS 2016; 19(1):26-28

Keywords: Filariasis, Pericardial effusion, Diethylcarbamazine

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).^{1,2,3} Unusual manifestations include a subcutaneous nodule, Filariasis of breast, lymphadenovari in the axilla

and others. Onchocerciasis is characterized by hanging groins, leopard skin and river blindness. Loiasis presents as subcutaneous swellings on the extremities, localized pain, pruritus and urticaria. Massive pericardial effusion due to Filariasis is rare. We present a patient who presented to us with symptomatic hemorrhagic pericardial effusion that was proved to be caused by Filariasis.

CASE REPORT

A 26 year old male 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. On general physical examination, patient had tachypnea, tachycardia and fever (101°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. CBC was normal (Table 1). X ray chest revealed an enlarged cardiac silhouette [Fig 1].

Correspondence

Dr. Waseem Raja Dar, M.D.,
Department of Internal Medicine Sanjeev Bansal
Cygnus Hospital
email: drwaseemdar@gmail.com

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.

Figure 1: X-ray Chest showing enlarged cardiac silhouette suggestive of pericardial effusion.

DISCUSSION

Lymphatic Filariasis is a common public health problem of tropical and subtropical countries.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

Figure 2: Echocardiogram of the patient showing massive pericardial effusion.

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 ³
TLC	8200/mm ³	Creatinine	1.3 mg/dl	Cell Type	Lymphos=70% Neutros= 10%
DLC	Neutros=70% Lymphos=21%	Bilirubin	1.45 mg/dl	Glucose	63 mg/dl
PLT	3 lacs/mm ³	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/Ist hour	Total Protein	6.76 g/dl		
		Albumin	3.8 g/dl		

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.

Filarial Pericardial Effusion causing cardiac tamponade which subsequently resolved with treatment with pericardiocentesis and Diethylcarbamazine (DEC).⁶ K Prasanthi reported a case of unresolving pericarditis that was found to be due to microfilariasis and that resolved with antihelminthic drugs.⁷ Peripheral blood smears may be negative for microfilaria 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.

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 Valand, Bhanumati S Pandya, Yoganand V Patil, Lalita G Patel. Subcutaneous filariasis: An unusual case report. *Indian Journal of Dermatology* 2007; 52(1): 48-49.
2. Bhattacharjee PK, Ray RP, Halder S. Filariasis of breast: An unusual presentation. *Ann Trop Med Public Health*; 5:376-8.
3. Adhish Basu, Sarath Chandra Sistla, Surendra Kumar Verma, S Jagdish. Lymphadenovariex in the axilla an unusual presentation of Filariasis. *Filaria Journal* 2006; 5:9.
4. Chowdhary M, Langer S, Aggarwal M, Agarwal C. Microfilaria in thyroid gland nodule. *Indian J Pathol Microbiol* 2008; 51:94-6.
5. Munish Sharma, Dinesh Gupta, Sujata Jetley. Case of Filarial Pericardial Effusion (PE) presented as cardiac tamponade which subsequently resolved with treatment with pericardiocentesis and Diethylcarbamazine. *Journal of Indian College of Cardiology Articles in Press*.
6. Prasanthi K, Nagamani K, Saxena N K. Unresolving pericarditis: Suspect filariasis in the tropics. *Indian J Med Microbiol* 2010; 28:73-5.
7. Paul C. Beaver. Filariasis without Microfilaremia. Presidential Address. *The American Society of Tropical Medicine and Hygiene*, Washington, D.C. 1969; 181-9.