ORIGINAL RESEARCH PAPER
Volume - 13 | Issue - 05 | May - 2024 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

TOMBSTONE OF THE WORM – TWO CASES OF SPLENIC MICROFILARIASIS

Pathology

Bhusse Sushil B Dept of Pathology, B.Y.L Nair hospital (Resident Pathologist).
Shinde Sweety V* Dept of Pathology, B.Y.L Nair hospital (Associate Professor). *Corresponding Author

ABSTRACT

Filariasis is caused by nematode parasites of the order Filariae, namely Wuchereria bancrofti and Brugia malayi. Splenic involvement can occur in extralymphatic or Meyers Kouwenar syndrome. Gross specimen can show nodules or diffuse enlargement. Microscopy showed cylindrical microfilariae with eosinophilic microabscesses.

KEYWORDS

spleen, microfilariasis, Meyers Kouwenar syndrome, eosinophilia

INTRODUCTION

Filariasis is caused by nematode parasites of the order Filariae, namely Wuchereria bancrofti and Brugia malayi. Indian states especially Odisha, Bihar, Kerala and U.P are endemic for filariasis.

Route of infection is cutaneous via vector bite. Vectors include female mosquito of Culex, Anopheles, Aedes species. Splenic involvement can occur in extralymphatic or Meyers Kouwenar syndrome.

Splenic filariasis is rare, documented only in a handful of cases. We hereby present two cases of isolated splenic filariasis[1-3]

CASE STUDY

Case 1 - A 40-year-old had fall under alcohol influence with traumatic splenic laceration. Case 2 - A 20-year-old female presented with abdominal lump. Radiology showed pancreatic solid pseudopapillary epithelial neoplasm with moderate splenomegaly.

Case 1 had diffuse splenomegaly while case 2 showed multiple splenic nodules (**Fig 1a).**

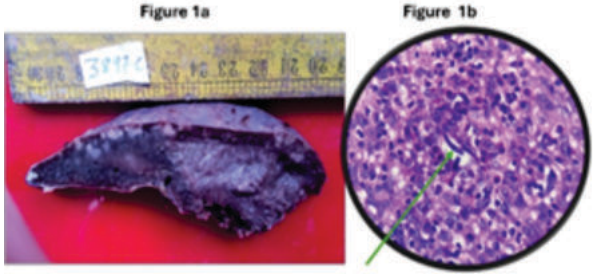

Figure 1a: Gross specimen - Splenomegaly with subcapsular 2mm-5mm firm nodules. **Figure 1b:** Microphotograph shows cylindrical microfilaria in eosinophilic background (H&E 400x)

On microscopy, both cases showed normal splenic capsule and white pulp. Red pulp showed microfilariae within eosinophilic abscesses **(Fig 1b, 2a, 2b).**

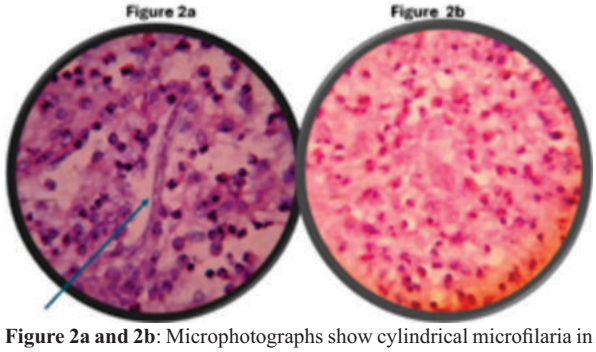

Figure 2a and 2b: Microphotographs show cylindrical microfilaria in eosinophilic background (H&E 400x and 1000x respectively)

Peripheral smear showed- 26-47% eosinophils. Buffy coat did not reveal any evidence of microfilariae. Post-splenectomy diethyl carbamazepine therapy was initiated.

DISCUSSION:

Clinical manifestations of filariasis occur in three major ways.
A] Lymphatic - by adult filaria

B] Extra-lymphatic - by microfilarial larvae

C] Meyers Kouwenaar syndrome /Tropical pulmonary eosinophilia - hypersensitivity reaction to microfilariae [1,2,3]

Lymphatic stage involves lymphatics, lymph nodes, testis, epididymis and breast. It can manifest as lymphangitis, elephantiasis, lymphadenopathy, chylocele.

Extra-lymphatic stage involves blood, body fluids, and organs such as joints, spleen, bone marrow. It manifests as fever with chills, arthritis, splenomegaly, aplastic anemia.

Meyers Kouwenaar syndrome presents as bloody sputum, asthmatic wheeze, eosinophilia, hepatosplenomegaly and absence of microfilaremia.

Spleen being an organ of phagocytosis can entrap circulating microfilariae in pulp cords. Subsequent larval death leads to granulomatous tissue response. Splenic filariasis is mostly asymptomatic while some cases manifest splenic masses.

Clinico-radiological differential diagnoses in spleen include splenic lymphoma, abscess, infarction or metastasis.

Needle aspiration should be avoided due to risk of splenic rupture and hemoperitoneum. iagnostic tests include_buffy coat examination, intradermal hypersensitivity test, complement fixation test, ELISA, Trop Bio (for adult worm) and PCR (for microfilaria). [1-4]

CONCLUSIONS

Despite endemicity of filariasis in Asian countries, splenic presentation is a rarity. Splenic involvement mimics various non-neoplastic and neoplastic lesions, thus posing a diagnostic challenge. Histopathology remains the gold standard for definitive diagnosis in splenic filariasis. Mass therapy with diethyl carbamazepine has been reported to show reduction of splenomegaly from 76% to 48% in endemic regions.

REFERENCES:

1] Bakshi G et al. Isolated Splenic Filariasis-A Diagnostic Dilemma. Bombay Hospital Journal 2012; 54:2.
2] Andola SK et al. Extralymphatic Filarial Disease in Spleen (Occult Filariasis)- A Report of 2 Cases. RGUHS J Med Sciences 2012; 2:1
3] Basu A et al. Filarial huge splenomegaly dramatically regressed by antifilarial medication. Intractable & Rare Diseases Research 2017; 6:215-218
4] Tan HW. An unusual cause of granulomatous inflammation. J Clin Pathol 2006; 59:548–549.