LETTERS TO THE EDITOR
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Unexpected Discoveries: Eosinophilia Unmasked by Splenic Microfilariasis in a Young Woman

Kazi B. et al.: Unexpected Discoveries: Eosinophilia Unmasked by Splenic Microfilariasis in a Young Woman

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To the editor,

Eosinophilia, defined as elevated eosinophil levels in the blood, can arise from various conditions, including allergic reactions, autoimmune diseases, malignancies, and infections. In endemic regions, filariasis is a significant public health issue. This report presents a unique case of splenic microfilariasis identified as an incidental finding during the evaluation of eosinophilia.

A 22-year-old female presented with a one-month history of an abdominal lump. Laboratory tests revealed moderate eosinophilia, with an absolute eosinophil count of 3 x 10^9/L, hemoglobin of 100 g/L, a total leukocyte count of 10 x 10^9/L, and a platelet count of 160 x 10^9/L. A hematology consultation was requested to investigate the eosinophilia.

Physical examination showed mild pallor, a palpable abdominal mass in the left upper quadrant measuring 6 x 5 cm, and mild splenomegaly extending 2 cm below the left costal margin. No signs of end-organ damage were noted. Peripheral blood and buffy coat smears showed no evidence of parasitic infection, and stool examinations for ova and cysts were negative.

After ruling out secondary (non-clonal) causes, Fluorescent In Situ Hybridization (FISH) testing yielded no significant findings. A contrast-enhanced computed tomography (CECT) scan revealed a solid cystic mass involving the distal pancreas, measuring 7 x 6 cm, with preserved anatomical planes and no enlarged lymph nodes, suggesting a diagnosis of a Solid Pseudopapillary Neoplasm (SPEN).

The patient underwent splenectomy and distal pancreatectomy. Her perioperative and postoperative courses were uneventful, although a wound seroma developed. Histopathological examination confirmed SPEN with moderate nuclear atypia and areas of necrosis. The spleen showed mild splenomegaly and multiple firm subcapsular nodules (Fig 1). Histopathology of the spleen revealed cylindrical fragments of microfilariae within eosinophilic abscesses and foreign body granulomas (Fig 2A 2B).

Following diagnosis, the patient was treated with diethylcarbamazine at a dosage of 6 mg/kg/day for three weeks, leading to the resolution of eosinophilia.

Eosinophilia is classified into primary (clonal) and secondary (reactive) types, with various underlying causes, including infections, autoimmune disorders, malignancies, and medications.[1] In this case, extensive assessments, including FISH analysis, failed to identify specific secondary causes, necessitating investigation for infectious origins, particularly filariasis.

Microfilariae, the larval stages of filarial worms, can accumulate in the spleen, eliciting an inflammatory response characterized by eosinophil infiltration and granuloma formation.[2] Histopathological analysis

confirmed microfilariae within eosinophilic abscesses, consistent with existing literature.[3,4] Splenic involvement in filariasis is uncommon, often presenting as an abdominal mass or splenomegaly in asymptomatic patients. This case highlights the diagnostic challenges in differentiating splenic filariasis from other conditions, which can lead to unnecessary surgeries. Comprehensive evaluation, including imaging and histopathology, is crucial for accurate diagnosis, as peripheral blood smears may miss microfilariae. The incidental finding of microfilariae post-splenectomy emphasizes the need for heightened awareness of atypical presentations of filarial infections.

Diethylcarbamazine (DEC) remains the primary treatment for lymphatic filariasis and is effective for splenic microfilariasis.[5] The resolution of eosinophilia post-DEC supports its efficacy, aligning with findings in endemic regions.

This case underscores the intricate relationship between eosinophilia and parasitic infections, particularly in endemic areas. It highlights the importance of considering filariasis in unexplained eosinophilia cases and the necessity of histopathological examination for definitive diagnosis. Clinicians should remain vigilant for atypical presentations and utilize appropriate treatments to mitigate complications, contributing to the understanding of parasitic infections in hematological abnormalities.

Keywords: Eosinophils, Clonality, Spleen

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Fig 1: Mild splenomegaly with subcapsular multiple firm nodules of size ranging from 2mm to 5mm.

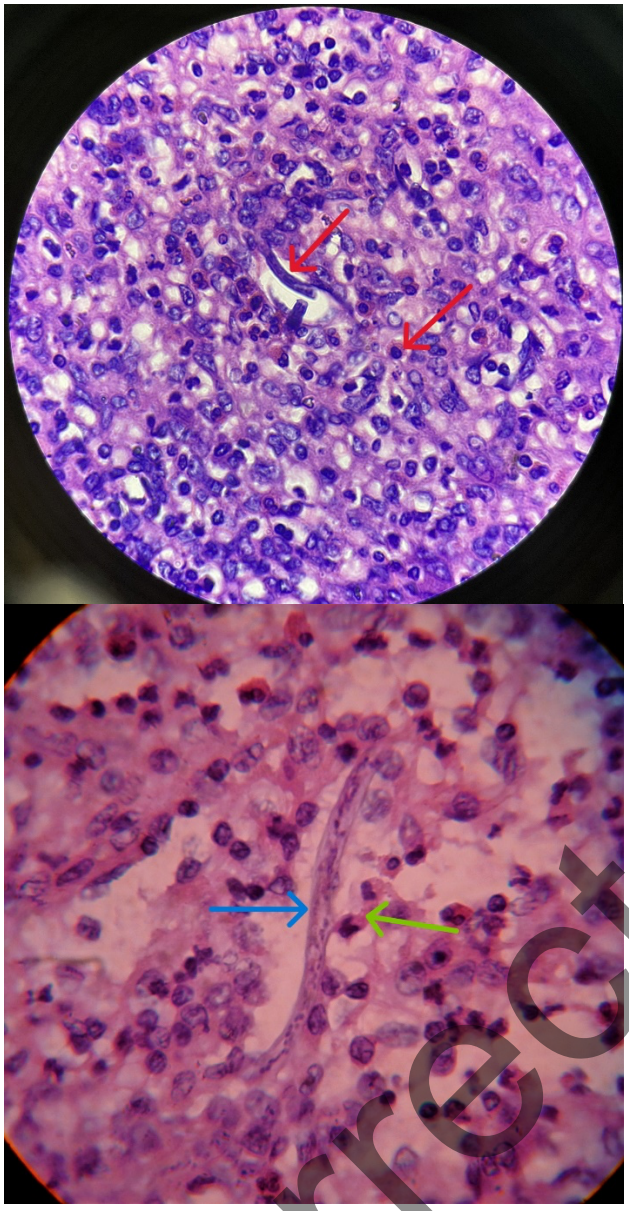

Fig 2A, 2B: Splenic red pulp showing cylindrical fragments of microfilariae within eosinophilic abscesses with foreign body granuloma.