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CLINICAL IMAGE

Microfilariae in association with intra-abdominal malignancies: cytological findings of two cases

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ABSTRACT

Filariasis is a major public health concern in tropical countries like India, presenting with lymphatic dysfunction. We report two cases of filariasis coexisting with intra-abdominal malignancies and present our cytological findings documented with high-resolution images.

Key words: Cytology, filariasis, intra-abdominal malignancies

Filariasis is an endemic infection in the tropical and subtropical regions of the world. Wuchereria *bancrofti* is the most common causative filarial worm accounting for about 95% of the total filarial infections. Most patients present with lymphatic dysfunction in the form of lymphocele, hydrocele, chyluria, or groin lymphadenovarix, as the worm resides in the lymphatic channels or lymph nodes, causing lymphangiectasia [1]. We report two rare cases of microfilariae coexisting with intra-abdominal malignancies detected on cytology.

Case 1

A 55-year-old male presented with the loss of appetite, generalized weakness and abdominal pain for 2 months. On examination, the patient was cachectic with a firm, ill-defined lump palpable epigastric lump. Stool occult blood test was positive. Abdominal ultrasound revealed thickened gastric wall, and under sonographic guidance, fine-needle aspiration cytology (FNAC) was performed from the thickened gastric wall to ascertain the etiology. Microscopic examination of the aspirate demonstrated large pleomorphic atypical cells with high nucleocytoplasmic ratio and nuclear hyperchromasia consistent with gastric carcinoma, and along with few microfilariae [Figure 1].

Case 2

A 50-year-old female presented with abdominal pain and jaundice for last 1 month. Computed tomographic scan showed a mass in the gallbladder with infiltration into the liver. An ultrasound assisted FNAC from the liver mass revealed pleomorphic malignant cells. These malignant cells at various places formed gland-like structures and existed along with few microfilarial worms. The patient was diagnosed as metastatic adenocarcinoma of the liver [Figure 2].

Our case series demonstrate the association of microfilariae with intra-abdominal malignancy; gastric malignancy in the first case, whereas metastatic liver adenocarcinoma in the second. A literature review revealed only few cases of

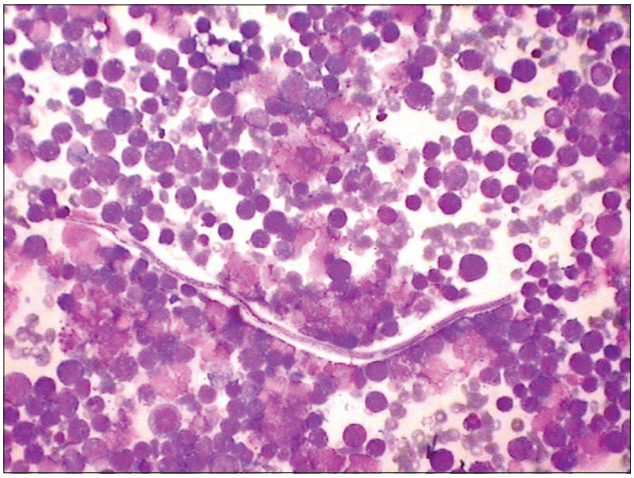

Figure 1 Gastric malignancy and microfilaria

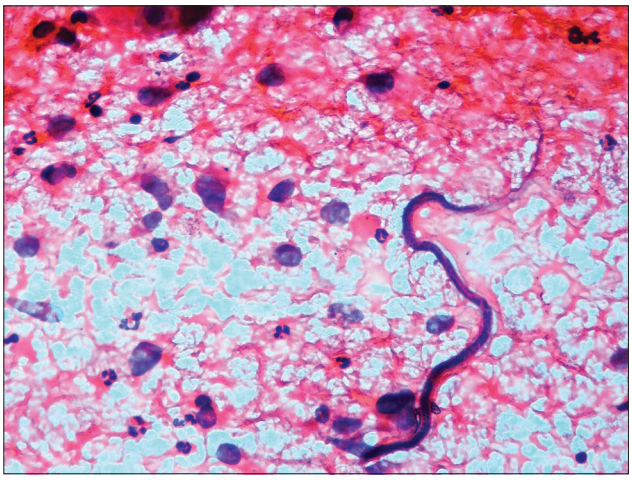

Figure 2 Metastatic adenocarcinoma of liver with microfilaria

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microfilariae in association with malignancies, of which most were tumors of the lymph node and lymphatics and malignant effusions of pleural and ascitic fluid [2]. Occasionally, they have been reported in association with primary malignant tumors of the thyroid [2], testis [2], pancreas [3], liver [4], and the urinary bladder [2]. With such rare association of microfilariae with malignancies, our case series serves best to promote awareness of such an association that might help physicians to choose appropriate chemotherapy for their patients. Moreover, our report also serves to add onto the existing pool of literature depicting association of microfilarial worms with intra-abdominal malignancies. The authors opined that rich blood supply of tumors could encourage the concentration of parasites at the tumoral site and subsequent rupture of these blood vessels may lead to hemorrhage and release of parasites into these areas. The observation of microfilarial worms in intra-abdominal malignancies in our case series could possibly be answered by the same explanation.

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Authors' Contributions

All authors contributed to the diagnosis, sequence alignment, drafting of the manuscript and subsequent revisions. All authors have read and approved the final version.

Consent

The authors certify that a written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the editor-in-chief of this journal.

Competing Interests

The authors declare that they have no competing interests.

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