

# Filariasis as a cause of subileus and exitus in a patient with solid tumor

OKAN KUZHAN<sup>1</sup>, YILDIRIM KARSLIOĞLU<sup>2</sup>, AHMET ÖZET<sup>1</sup>, ÖMER GÜNHAN<sup>2</sup>

Gülhane Medical School, Departments of <sup>1</sup>Medical Oncology and <sup>2</sup>Pathology, Ankara-Turkey

## ABSTRACT

A 61-years old male patient with previous history of thyroid papillary cancer was hospitalized because of nausea, vomiting, abdominal pain, constipation, pruritus and obstipation. Paralytic or mechanic ileus as a tumor complication was considered in the differential diagnosis. But to our surprise, endoscopic biopsy showed viable microfilaria in gastric glands. Even rare, parasitic diseases should be taken into consideration in the differential diagnosis of comorbid conditions in cancer patients. [Turk J Cancer 2008;38(3):145-146]

## KEY WORDS:

Thyroid papillary cancer, filariasis, microfilaria

## INTRODUCTION

Diseases arising during the course of cancer pose significant diagnostic and therapeutic challenges to both the patient and the physicians. Especially rare parasitic infestations may be overlooked.

Lymphatic filariasis is caused by infection with one of three nematodes: *Wuchereria bancrofti*, *Brugia malayi* or *Brugia timori*. These agents cause similar clinical syndromes. *W. bancrofti* occurs in the following regions: sub-Saharan Africa, Southeast Asia, the Indian subcontinent, many of the Pacific islands, and focal areas in Latin America. *B. malayi* occurs mainly in China, India, Malaysia, the Philippines, Indonesia, and various Pacific islands. We report here a case of filariasis with a bizarre symptomatology.

## CASE REPORT

A 61-years old man with metastatic thyroid papillary cancer was hospitalized because of nausea, vomiting, abdominal pain, constipation, pruritus and obstipation. History included cancer diagnosis with metastasectomy at T2-T4 vertebrae in July 1995 (Figure 1), total thyroidectomy in August 1995, resection of the local recurrence in December 1995, totally 1100 mCi I<sup>131</sup> radioablative therapy in 15 sessions, relapse with paraparesis due to T10 vertebrae metastasis in January 2003, second metastasectomy and 200 mCi I<sup>131</sup> administration. At presentation abdominal distention, right upper quadrant tenderness, diminished bowel sounds, paraparesis, swollen legs and depressive mood were noted. The skin was normal apart from excoriations. Urinalysis revealed hematuria, py-

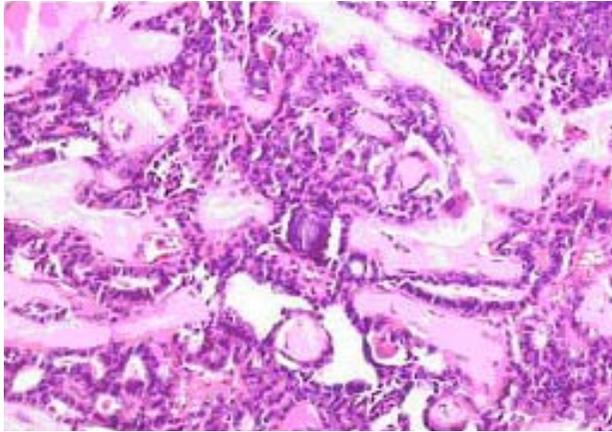


Fig 1. Gastric mucosa showing edema, marked inflammatory cell infiltration and fibrosis (x40, H&E)

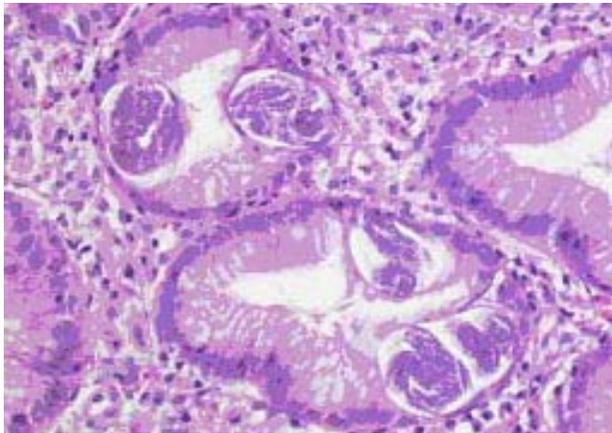


Fig 2. In higher power, microfilaria are seen in between the gastric glandular epithelial cells (x200, H&E)

uria and trace proteinuria (5-6 red cells, 9-10 white cells per HPF). Hemogram, blood smear and blood chemistry analysis revealed no abnormality. Blood electrolytes and serum TSH were normal. At gastroduodenoscopy antrum, corpus and duodenum were highly inflamed and edematous. Biopsy specimens were sent to pathology section. Colonoscopy and barium enema revealed no obstruction in small and large bowel. In a week bigeminy ventricular beats and unilateral pretibial edema with positive Homans sign developed. Echocardiography revealed findings consistent with ischemic cardiac disease whereas Doppler ultrasonography revealed no thrombus in deep leg veins. Computerized tomography of the pelvis showed nothing but air fluid levels in intestinal segments. On the second day of low molecular weight heparin therapy, progressive dyspnea, orthopnea, pulmonary rales, subicterus with

elevated LDH and total bilirubin levels developed. The patient succumbed to this possible pulmonary embolism so that we could not find the opportunity to confirm our clinical diagnosis with laboratory methods. After exitus of the patient, the pathology section's report was obtained, which states inflammatory infiltration of intermediate density in the entire stomach and duodenum with multiple viable microfilarias in gastric glands (Figure 2). The species of the microfilaria could not be identified exactly, but they were probably of *W. bancrofti* origin. With detailed questioning of the patient's relatives, we learned that he had been in Egypt for 3 months 10 years ago.

## DISCUSSION

In the retrospective view, leg edema, nausea, vomiting, abdominal pain, constipation, obstipation, pruritus and pulmonary embolism are consistent with filariasis. Parasitic infestations encountered in end-stage cancer carries a poor prognosis. As with most helminth infections, the adult parasite does not replicate within the human host. Thus, the adult worm burden (as opposed to the microfilarial burden) cannot increase once an individual is no longer exposed to infective larvae, such as after leaving an endemic region. Since the mosquito vectors are not efficient transmitters of filariasis, a relatively prolonged stay in an endemic area is usually required for the acquisition of infection. Our patient had been in Egypt for 3 months. Travelers and expatriates do not usually have sufficient exposure to filariasis to develop the chronic complications of infection that are seen with high worm burdens. Rather, these individuals can demonstrate an allergic-type reaction to developing larvae that rarely occurs in endemic persons.

This is the first case of filariasis reported in a patient with a solid tumor. And in the literature, there are only a few filariasis cases diagnosed via gastric cytology (1,2). An allergic gastroenteritis due to microfilaria may have caused the subileus in our case. Because postmortem examination was not performed, the cause of death is obscure. Even rare, parasitic diseases should be taken into consideration in the differential diagnosis of comorbid conditions in cancer patients.

## References

1. Whitaker D, Reed WD, Shilkin KB. A case of filariasis diagnosed on gastric brush cytology. *Pathology* 1980;12:483-6.
2. Singh M, Mehrotra R, Shukla J, et al. Diagnosis of microfilaria in gastric brush cytology. A case report. *Acta Cytol* 1999;43:853-5.