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Journal

Proceedings of the UCLA Department of Medicine, 17(1)

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Publication Date

2013-07-28

CLINICAL VIGNETTE

A Small Bowel Obstruction Caused by Mycobacterial Spindle Cell Pseudotumor

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Attestation: No funding sources or conflicts of interest to report. All authors had access to the data and a role in writing the manuscript.

Key Words: Mycobacterium, pseudotumor, immunosuppressed, immunocompromised, transplant

Introduction

Mycobacterial spindle cell pseudotumor (MSP) is an exceedingly rare tumor-like lesion characterized by spindle-cell and histiocyte proliferation secondary to mycobacterial infection. It usually affects immunocompromised patients and in most cases occurs in lymph nodes. We present a case of MSP manifesting as a small bowel obstruction.

Case Report

A 63 year-old man with a history of end-stage renal disease status post renal transplant and small bowel carcinoid status post excision presented with fevers. Infectious work-up was negative, however a CT scan of the abdomen showed mural thickening and fat stranding around his small bowel anastomosis along with mesenteric lymphadenopathy. This raised concern for an infectious or inflammatory process or post-transplant lymphoproliferative disorder. The lymph nodes were not amenable to percutaneous biopsy, and his fevers eventually resolved with empiric antibiotics and he was discharged.

On outpatient follow-up, an acid-fast bacilli urine culture from his hospitalization grew *Mycobacterium avium-complex* (MAC). He was prescribed azithromycin and ethambutol.

The patient returned to the hospital several weeks later with left-sided abdominal pain and fevers. CT scan of the abdomen showed a small bowel obstruction along with interval enlargement of the retroperitoneal lymph nodes seen on prior imaging. Given the severity of the obstruction, the patient underwent an exploratory laparotomy where a tumor was found in the mesentery at the site of the obstruction. This tumor was excised along with surrounding lymph nodes and the involved segment of small bowel. There was initial concern for recurrence of his carcinoid tumor or a lymphoma, however surgical pathology and culture identified the mass as a mycobacterial spindle cell pseudotumor secondary to MAC infection. The patient's small bowel obstruction and fevers resolved after his surgery and he was discharged on an indefinite course of azithromycin and ethambutol



Gross specimen of resected bowel containing tumor (left). AFB stain demonstrates numerous acid-fast bacilli in both the cytoplasm of the spindle cells as well as within the cytoplasmic vacuoles of the histiocytes (right).

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Discussion

Submitted on July 28, 2013

Mycobacterial spindle cell pseudotumor (MSP) is a rare presentation of mycobacterial infection usually seen in AIDS patients with CD4 counts less than 60/ml and those with solid organ transplants, as in our patient^{1,2}. It can be caused by both *M. tuberculosis* and nontuberculosis mycobacterium. Less than 30 cases have been reported in the literature since 1985, when MSP was first described³. It has been described as occurring in the skin, spleen, appendix, bone marrow, brain, and most recently the lung^{4,5}. To our knowledge, this is the first reported case of MSP causing a small bowel obstruction.

Histologically, MSP has been described as an "exuberant spindle cell lesion," characterized by histiocytes containing acid-fast mycobacteria. It is also described as resembling a mesenchymal neoplasm, including Kaposi's sarcoma. Because of their shared histologic features and predilection for immunosuppressed hosts, proper identification is important as the two diseases have distinct prognoses and treatments¹.

Given its rarity, there are no set guidelines for treatment of MSP. Treatment is usually guided by the mycobacterium species identified. Patients with MSP secondary to MAC can be treated with clarithromycin and ethambutol. Duration is usually life-long in patients without immune reconstitution. Anti-retroviral therapy is indicated in patients with AIDS-associated MSP.

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