THE AMERICAN JOURNAL of MEDICINE®

Tuberculous Appendicitis

To the Editor:

Gastrointestinal tuberculosis (TB) is a relatively rare form of extrapulmonary TB in the US and is estimated to occur in only 1.5%-3% of all cases worldwide. We describe a case of TB appendicitis in an individual receiving chronic immunosuppression for systemic lupus erythematosus.

CASE REPORT

A 37-year-old nurse presented with 1 week of periumbilical abdominal pain radiating to both lower abdominal quadrants and fever to 38.3°C (101°F). The patient complained of a mild, nonproductive cough and decreased appetite but denied nausea, vomiting, or diarrhea. On examination, her abdomen was mildly tender to palpation. She had a normal urinalysis and a negative urine pregnancy test.

The patient's past medical history was significant for systemic lupus erythematosus, for which she was recently started on Plaquenil (Sanofi-Aventis, Bridgewater, NJ) and mycophenolate mofetil. She was diagnosed with latent tuberculosis infection by positive purified protein derivative test during routine pre-employment screening; a chest radiograph was negative at that time. She was never offered treatment for latent tuberculosis infection. The patient was a native of the Philippines but had lived in the US for 3 years.

Computer tomography (CT) of the abdomen and pelvis showed a 1.1-cm dilated, nonfilling appendix with mural enhancement consistent with appendicitis, as well as fluid-density structures, likely abscesses or necrotic lymph nodes, the largest measuring 2.8 × 1.9 cm with some rim enhancement (Figure). The patient was taken to the operating room for an open appendectomy.

Intraoperatively, the patient was noted to have a thickened and inflamed appendix without perforation and free peritoneal fluid, which was sent for culture. On pathologic examination, the appendix was notable for the presence of multiple caseating granulomas and acid-fast bacilli. A postoperative chest radiograph demonstrated multiple nodular

Funding: None.

Conflict of Interest: None.

Authorship: The authors were involved in the clinical care of the patient, had access to the clinical data obtained for the care of the patient, and participated in the drafting and critical revision of the manuscript, and approved the final manuscript.

Requests for reprints should be addressed to Tracy E. Bercu, MD, Division of Infectious Diseases, UCLA Medical Center, 10833 Le Conte Ave., 37-121 CHS, Los Angeles, CA 90095.

E-mail address: tbercu@mednet.ucla.edu

Figure

opacities throughout both lungs, with a new alveolar consolidation within the right lung base. CT scan of the chest showed a mass-like consolidation in the right upper lobe measuring 29×16 mm, development of miliary nodules throughout the lungs, development of bilateral basilar atelectasis with bilateral small pleural effusions and bilateral lower lobe opacities. Multiple cultures from sputum and the appendix grew *Mycobacterium tuberculosis*.

Once the diagnosis was established, the patient was treated with a 4-drug TB regimen in addition to holding her immunosuppressant medications. She rapidly improved clinically and was discharged home on postoperative day 11. Follow-up sputum cultures were negative and the patient was able to return to work.

DISCUSSION

In 2008, the incidence of TB within the US was 4.2 cases per 100,000 population, the lowest rate recorded since national reporting began in 1953.[1] Foreign-born persons in the US continue to bear a disproportionate burden of TB, with an annual rate 10 times higher than among US-born persons. Extrapulmonary TB constitutes approximately 17% of the cases in the US, with TB appendicitis rarely reported. The most common clinical features of abdominal TB are fever, abdominal pain, and weight loss.[2] CT may offer a subtle distinction between acute bacterial appendicitis and TB appendicitis, displaying abdominal lymphadenopathy, with lymph node peripheral rim enhancement being the most common finding.[3] In patients from a TB-endemic area who present with abdominal pain and have findings of enhancing lymph nodes and are immunocompromised,[4] the diagnosis of tuberculous appendicitis should be considered.

Tracy E. Bercu, MD[a]
Zachary A. Rubin, MD[a]
Vatche G. Agopian, MD[b]
[a]*Division of Infectious Diseases*
[b]*Department of Surgery*
UCLA Medical Center
Los Angeles, Calif

doi:10.1016/j.amjmed.2010.05.032

References

1. Centers for Disease Control and Prevention. Trends in tuberculosis—United States, 2008. *MMWR Morb Mortal Wkly Rep*. 2009;58:249-253.
2. Jakubowski A, Elwood RK, Enarson DA. Clinical features of abdominal tuberculosis. *J Infect Dis*. 1988;158:687-692.
3. Sood R. Diagnosis of abdominal tuberculosis: role of imaging. *J Indian Acad Clin Med*. 2001;2:169-177.
4. Chu AD, Polesky AH, Bhatia G, Bush TM. Active and latent tuberculosis in patients with systemic lupus erythematosus living in the United States. *J Clin Rheumatol*. 2009;15:226-229.