A 47-YEAR-OLD MAN who had been diagnosed with rheumatoid arthritis 5 years previously was referred to us for management of bilateral pleural effusions.

At the time of his diagnosis, his symptoms included pain and swelling of both wrists and the metacarpal joints of both hands. His serum C-reactive protein level had been elevated at that time, but he had no detectable rheumatoid factor. Findings on magnetic resonance imaging of the hand were very suggestive of rheumatoid arthritis (FIGURE 1).

He had been started on the anti-tumor necrosis factor agent etanercept but his symptoms improved only slightly, and therefore a glucocorticoid had been added.
Two years later, he developed abdominal pain, for which he underwent cholecystectomy. However, he continued to have chronic, generalized abdominal pain, and over the next 4 years he lost 25 lb. Upper endoscopy showed no mucosal changes, and multiple random biopsy samples were obtained for histologic evaluation (Figure 2) as part of his workup for chronic abdominal pain.

Q: What is the diagnosis?

A: As shown in Figure 2, staining of duodenal specimens showed intact villous architecture, with focal expansion of the lamina propria by “foamy” macrophages, rare plasma cells, and eosinophils, a key feature of Whipple disease. Periodic acid-Schiff staining showed numerous bacilli within the macrophages, thus confirming the diagnosis of Whipple disease. The diagnosis was also confirmed by polymerase chain reaction testing. Staining for acid-fast bacilli was negative.

WHEN TO CONSIDER WHipple DISEASE

Whipple disease is a rare systemic disease with a very low incidence rate worldwide. Thus, its prevalence is difficult to estimate accurately. It is caused by a gram-positive bacterium, *Tropheryma whippelii*. The typical clinical manifestations are diarrhea, abdominal pain, weight loss, and fever. In most patients, these are often preceded by articular symptoms, as in our patient, who had articular symptoms for 5 years before he was diagnosed with Whipple disease.

Interestingly, our patient also had pleural effusion, which is uncommon in Whipple disease.

The pathogenesis of Whipple disease is thought to be related to bacterial replication within macrophages, which leads to a systemic immune response and tissue infiltration by the organism. Histologic evaluation is the most common way to confirm the diagnosis.

As our patient’s disease course illustrates, Whipple disease should be part of the differential diagnosis of arthritis, as antibiotic therapy alone leads to a dramatic clinical response.

Our patient was started on a 2-week course of intravenous ceftriaxone followed by oral sulfamethoxazole and trimethoprim, and his abdominal and articular symptoms completely resolved within 4 weeks.

Histologic evaluation is the most common way to confirm the diagnosis.

REFERENCES


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CME ANSWERS

Answers to the credit tests on page 327 of this issue

Swollen lymph nodes 1B 2D
Fertility in cancer patients 1A 2D
Hereditary angioedema 1D 2D
Aspirin for cardiovascular disease 1E 2A