Persistent Diarrhea

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Abstract

A 63-year-old man presented with massive diarrhea and weight loss. This was preceded by nonspecific symptoms for three years, which resembled sarcoidosis. By duodenal biopsy, the diagnosis of Whipples disease was confirmed. Antibiotic treatment resulted in rapid and complete disappearance of signs and symptoms.

Key words

Whipple disease - diarrhea - sarcoidosis

Introduction

A 63-year old man was admitted to our hospital with persistent diarrhea lasting for more than six weeks. He reported having more than 10 bowel movements per day. The bowel movements were equally distributed during day-time and night-time. There was no visible blood with his stools. Furthermore, he had lost 8 kilograms of weight during the period. He denied abdominal pain or other symptoms. The patient had been well until three years earlier, when enlarged lymph nodes associated with arthralgias had occurred and a diagnosis of sarcoidosis was made at another hospital. A steroid therapy had resulted in disappearance of the arthralgias. Despite this therapy, the C-reactive protein as well as the sedimentation rate had continuously been found elevated.

Case report

The 63-year-old patient presented with massive diarrhea. He was in a poor state with a body mass index of 19.8. A physical examination showed normal bowel sounds. His temperature was 37.8°C. The pulse was 72, and the blood pressure was 100 / 80 mmHg. There were no oedemas, no heart murmurs, no palpable lymph nodes. Neither the liver nor the spleen were palpable. Neurologic examination was normal. The rectal palpation was normal with no signs of blood. Laboratory tests showed a C-reactive protein of 6 mg/dL (normal < 0.6), a sedimentation rate of 40, and a normocytic normochrome anemia (hemoglobin 11 g/dL). Serum iron was 12 microg/dL (normal, 54-167). Serum albumin was 2.3 g/dL (normal, 3.4-5.1). All other results of routine lab (including creatinine, electrolytes, urinalysis, liver enzymes, white blood count) were within normal values. Serum antibodies (ANA, ANCA, ASMA, AMA) were normal. Stool specimens were normal for pathogenic bacteria, parasites, pancreatic elastase. Chest X-ray, plain abdominal film, ECG, echocardiography were normal. Abdominal ultrasound showed a thickened wall of the small intestine. This was confirmed by computed tomography. Upper gastrointestinal endoscopy revealed lymphangiectasia in the duodenum (Fig. 1). Computerized virtual chromoendoscopy (Fujinon intelligent chromoendoscopy) disclosed lymphangiectasia even more explicitely (Fig. 2). By histologic examination, massive infiltration by *Tropheryma whipplei* was detected

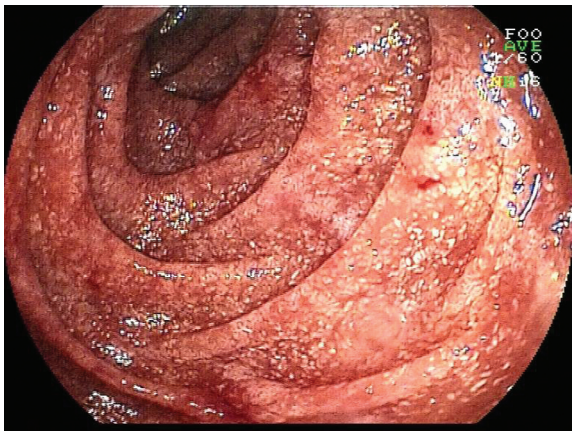

Fig 1. Duodenoscopy revealing lymphangiectasia.

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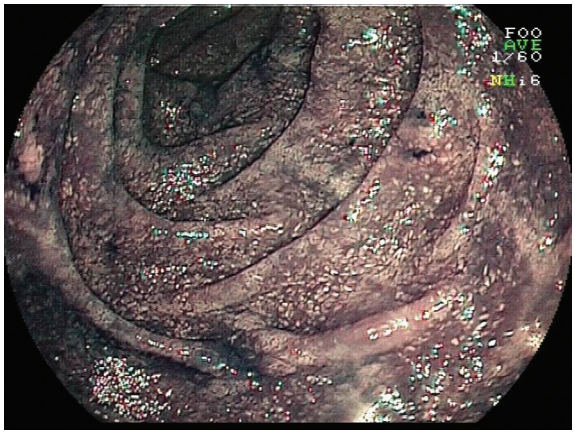

Fig 2. Computerized virtual chromoendoscopy applying a mode for enhancing superficial alterations (mode 4, FICE, Fujinon intelligent chromoendoscopy) showed massive lymphangiectasia.

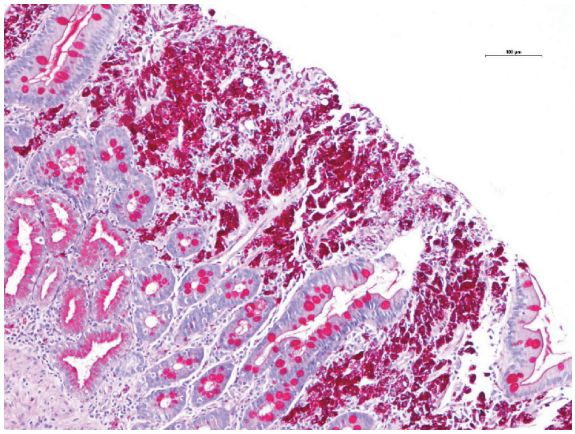

Fig 3. Histologic examination using PAS staining revealed massive infiltration by Tropheryma whipplei shown as inclusions within macrophages.

(Fig. 3). A polymerase chain reaction was positive for *Tropheryma whipplei*.

An antibiotic regimen was started. Cefuroxim and streptomycin were applied intravenously for two weeks. This was followed by an ongoing oral administration of trimethoprim–sulfamethoxazole. Oral antibiotic therapy was recommended to the patient for at least one year. The diarrhea ceased completely within three days after start of the antibiotic therapy. No recurrence was observed within the follow-up period of seven months so far.

Discussion

Whipple´s disease is a rare condition. According to a recent review, only about 1000 cases have been documented worldwide [1]. It may occur in patients of all ages and ethnies. However, the typical patient is a middle-aged whiteman [1], as was our patient. The first description of the disease was published 90 years ago [2]. Only 15 years ago, the causing agent was identified: *Tropheryma whipplei* [3].

The disease is characterized by a non-specific prodromal stage, and a steady-state stage. During the prodromal stage, arthralgia or arthritis are among the most frequent symptoms. In the steady-state stage, diarrhea and/or weight loss are the characteristic symptoms. Other organs can occasionally be involved. Without immunosuppressive therapy, the average time between the prodromal and the steady-state stage is about six years. If immunosuppressants are applied, a more rapid progression may be observed, as was the case in our patient. Besides the typical symptoms, patients with Whipple´s disease may present with signs or symptoms of malabsorption with involvement of the small-intestine, lymphoma, sarcoidosis, endocarditis, celiac disease, rheumatic diseases, connective tissue diseases, or with a variety of neurologic diseases [1]. Thus, our patient most probably had already suffered from Whipple´s disease when a diagnosis of sarcoidosis was suspected, and a steroid therapy had been initiated. We applied the current standard of antibiotic therapy: parenteral administration of streptomycin combined with with penicillin G or with ceftriaxone for 2 weeks. This has to be followed by a standard oral regimen of trimethoprim–sulfamethoxazole (160 mg of trimethoprim and 800 mg of sulfamethoxazole, twice per day) for at least one year. Even with this long-lasting antibiotic therapy, patients with Whipple´s disease may show relapses in up to one third of cases [1]. Relapses may occur within up to five years, and typically show a neurologic involvement. Fortunately, our patient is without symptoms so far.

Conclusion

The patient presented with massive diarrhea and weight loss. This typical history of Whipple´s disease was preceded by nonspecific symptoms for three years. the diagnosis was confirmed by duodenal biopsy. Antibiotic treatment resulted in complete disappearance of signs and symptoms.

References

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