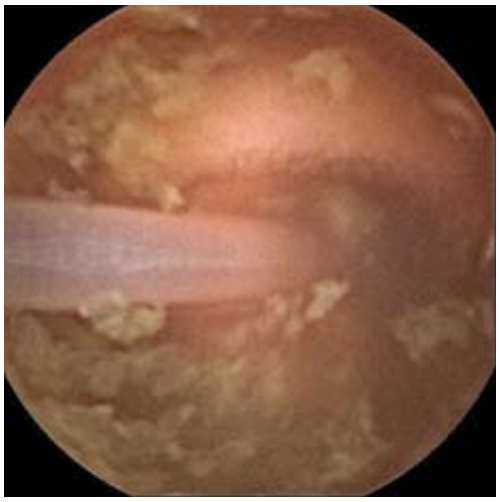
IMAGE OF THE ISSUE

Diphyllobothrium Latum Identified by Capsule Endoscopy - an Unusual Cause of Iron-Deficiency Anemia

Carol Stanciu[1], Anca Trifan[1], Ana-Maria Singeap[1], Catalin Sfarti[1], Camelia Cojocariu[1], Mariana Luca[2]

1) Institute of Gastroenterology and Hepatology; 2) Department of Parasitology, University of Medicine and Pharmacy, Iasi, Romania



A 54-year-old woman was admitted for unexplained anemia. She had no significant personal or family medical history. Except pallor, no pathological elements were found at the physical examination. Laboratory evaluation showed red blood cells 3,100 000/μL, hemoglobin (Hb) 8 g/dl and hematocrit 27.7% with low mean corpuscular volume 76.9 (normal 80-97 fL), corpuscular Hb 22 (normal 26-34 pg) and cell Hb concentration 28.9 (normal 32-36 g/dl). The white cell and platelet counts were normal. Liver tests, coagulation tests, urinalysis were normal. Ferritin was low 10 ng/ml (normal 20–150 ng/ml). The chest X-ray and the abdominal ultrasound were normal. A gynecological cause of anemia was excluded. A fecal occult blood test was positive. No abnormalities were detected on upper gastrointestinal endoscopy, colonoscopy, and small bowel follow-through X-ray. Fecal microscopy was negative. The patient was treated with oral iron supplement. Two months later, her Hb (8.4g/dl) and ferritin (12ng/ml) were still low. The small bowel capsule endoscopy was performed and alive *D. latum* was visualized in the jejunum (Fig.). In one of the two sequential stool specimens the ova of *Diphyllobothrium* were detected. The patient received niclosamide and iron supplement. Six weeks later, hemoglobin returned to normal.

Parasitic worms might be an important cause of obscure gastrointestinal bleeding [1-3]. Diphyllobothrium species (e.g. *D. latum, dentriticum, pacificum, ursi, lanceolatum, cordatum, yonagoensis etc*) have been reported to colonize humans in many countries and tend to have endemicity in areas where consumption of raw/precooked fish is popular (Scandinavia, northern Europe). *D. latum* is acquired by eating raw or undercooked fresh water fish (white fish, salmon, trout, pike), and is the largest parasite of humans (10-12 meters in length). It can cause vitamin B12 deficiency by consuming dietary cobalamin or by producing a substance that splits the vitamin from intrinsic factor in the small intestine, interfering with host absorption of the vitamin; however, megaloblastic anemia an unusual complication. *D. latum* is diagnosed by finding parasite eggs or proglottids in stool specimens, and also by capsule endoscopy [4].

There are two atypical features of our case: first, *D. latum* was associated with iron-deficiency anemia and, second, the absence of ova in stool at the initial examination, the worm being identified by capsule endoscopy.

References

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