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Medical Imagery

Severe iron-deficiency anaemia due to hookworm infection in Europe

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A 60-year-old man presented with recurrent melena, haematochezia, and 5-kg unintentional weight loss over 12 months. Laboratory tests showed severe iron-deficiency anaemia (haemoglobin 7·5 g/dl, serum iron 10 µg/dl, ferritin 6·4 ng/ml, transferrin saturation 2%) without eosinophilia. Esophagogastroduodenoscopy was normal; colonoscopy revealed a Paris Is, JNET 2a polyp in the transverse colon, which was resected. Capsule endoscopy excluded mid-gastrointestinal bleeding, but anaemia deteriorated (haemoglobin 6·9 g/dl). Lower enteroscopy showed flattened, oedematous villi in the terminal ileum with marked eosinophilic infiltration of the lamina propria (Figure a and b). On repeat colonoscopy, multiple white worms (10–13 mm), consistent with hookworms, were seen in the transverse colon (Figure c and d).

Anthelmintic therapy with mebendazole 100 mg twice daily for three days was initiated. Consequently, clinical symptoms and laboratory indices improved rapidly (Figure e and f).

Hookworms, members of the soil-transmitted helminths, remain a major global health burden, infecting millions worldwide and causing severe chronic iron-deficiency anaemia [1].

While approximately 500 million people are annually affected by these pathogens in the tropical regions [2,3], in Europe, helminth infections are rare and usually affect children or travellers from endemic regions [4]. Although gastrointestinal bleeding and anaemia are known manifestations of hookworm infection [5], this case illustrates that, even in high-income, non-endemic countries, intestinal helminthiasis should be considered in adults with

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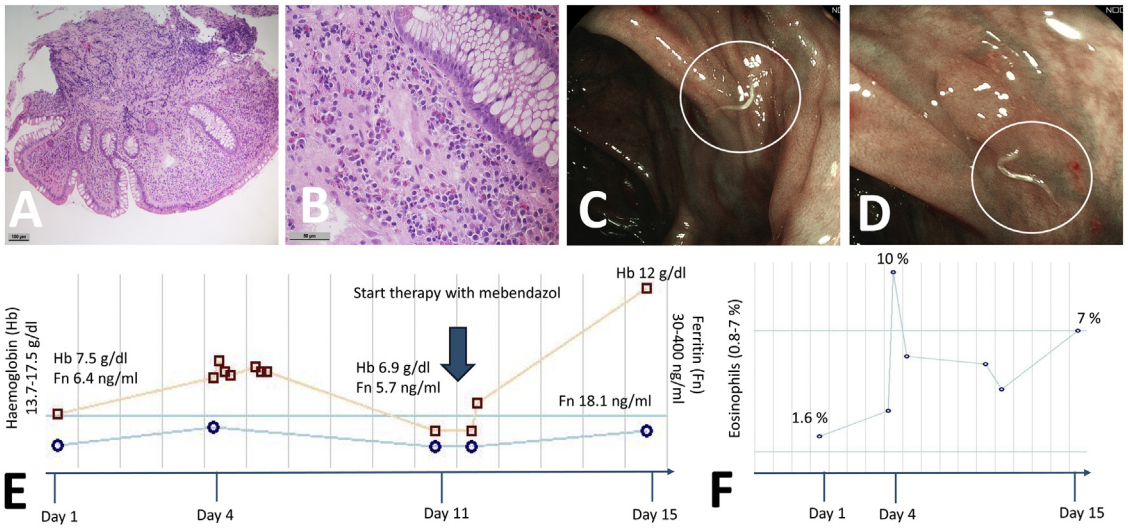

Figure 1. Flattened and oedematous villi in the terminal ileum and an increased number of eosinophils within the lamina propria (Fig. a and b: H&E staining, 100x (a) and 400x (b) magnification). Endoscopic images from the colon transversum showing a small parasitic white worm, approximatively 10-13 mm in length (c and d). Course of laboratory parameters during hospitalization (e and f).

severe anaemia, obscure gastrointestinal bleeding, weakness, and weight loss, as these infections are readily treatable.

Informed consent

Informed consent for publication was obtained.

Declaration of competing interest

The authors declare no conflict of interest.

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