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**Dientamoeba fragilis infection in elderly patients**

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**Background:** *Dientamoeba fragilis* is a pathogenic protozoan of the human gastrointestinal tract with a worldwide distribution. It has emerged as an important and misdiagnosed cause of chronic gastrointestinal illnesses such as diarrhea and 'irritable-bowel-like' gastrointestinal disease. Higher rates of infection have been described in children. However, very little research has been conducted on elderly patients. This study describes the characteristics of *D. fragilis* infection in elderly patients.

**Material/methods:** We perform a descriptive study in all patients older than 60 years diagnosed with *D. fragilis* infection. Each patient's clinical history, including episodes of diarrhea within the preceding 3 months and abdominal pain, was collected. Diarrhea was defined as at least three unformed or liquid stools per day for at least 3 days. Blood tests and biochemical analyses, including liver enzyme levels, were performed for all patients. Eosinophilia was defined as  $>0.5 \times 10^9$  eosinophils/l. Three stool samples per patient were concentrated using a Copropack Extraction Kit C100 (Cromakit S.L., Spain) following manufacturer's instructions, stained with lugol and screened under a light microscope with a low magnification to detect helminth eggs, protozoa trophozoites, and cysts. Nucleic acids were extracted from stool samples with QIAamp DNA Stool Mini Kit (Qiagen, Netherlands) and genome of *D. fragilis* was detected using a PCR assay. A pinworm test was performed in stool samples of all patients. Parasitological controls were performed at 4 and 8 weeks after the end of treatment in all patients. All patients were treated with metronidazole 500 mg/8 h or paramomycin 250 mg/8 h. Patients

with *E. vermicularis* co-infection and/or an *E. vermicularis*-positive case in the family were treated with mebendazole 100 mg/12 h for 3 days.

**Results:** Fifteen patients (53.3% female, mean age 63[3]) were studied and treated. Most of them were from Spain (86.6%), followed by those who came from Equatorial Guinea and Colombia (6.7% each). Six patients were diagnosed during a study of contacts. Five patients had children in the family. Eleven patients were treated with metronidazole and 4 with paramomicin. While seven patients (46.7%) were asymptomatic, the most frequent symptoms in the remaining patients were abdominal pain (6 patients) and diarrhea (2 patients). The mean level of eosinophilia was  $1.361 \pm 1.676 \times 10^9$  cells/l. Five patients had hypereosinophilia in the blood. Three patients had a co-infection with *E. vermicularis*. In only one patient, who was treated with metronidazole, *D. fragilis* was detected in stool samples taken 4 weeks after the treatment. The remaining patients cured.

**Conclusions:** *D. fragilis* detection should be included in the diagnostic protocol of elderly patients with abdominal pain or eosinophilia, even without contact with children. Treatment with metronidazole seems to be an effective option.