Infections of Blastocystis hominis and microsporidia in cancer patients: are they opportunistic?

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Abstract

Chemotherapy can cause immunosuppression, which may trigger latent intestinal parasitic infections in stools to emerge. This study investigated whether intestinal parasites can emerge as opportunistic infections in breast and colorectal cancer patients (n=45 and n=10, respectively) undergoing chemotherapy treatment. Breast cancer patients were receiving a 5-fluorouracil/cyclophosphamide (FEC) regimen (6 chemotherapy cycles), and colorectal cancer patients were receiving either an oxaliplatin/5-fluorouracil/folinic acid (FOLFOX) regimen (12 cycles) or a 5-fluorouracil/folinic acid (FOLFOX) regimen (6 cycles). Patients had Blastocystis hominis and microsporidia infections that were only present during the intermediate chemotherapy cycles. Thus, cancer patients undergoing chemotherapy should be screened repeatedly for intestinal parasites, namely B. hominis and microsporidia, as they may reduce the efficacy of chemotherapy treatments.

Keywords

Blastocystis hominis; Microsporidia; Opportunistic infection; Cancer; Chemotherapy

1. Introduction