Background: Blastocystis hominis is an intestinal protozoan. The pathogenic role of this organism in human beings is still controversial and has varied among reports from different geographic areas. The purpose of this study was to determine the clinical significance of B. hominis in a Tropical Medicine unit in Northern of Spain. Methods: During the years 2007-2011 we conducted a prospective screening program of detection of B. hominis in all patients attending in Tropical Medicine Unit of Hospital Universitario Central of Asturias, in the north of Spain. Three stool samples were analyzed through direct microscopic examination with formol-ether concentration. Results: 810 patients were analyzed. Twenty patients (2.4%) presented B. hominis under direct microscopy. Thirteen patients were female, average age 38[16] years. The most frequent country of origin were Spain (48%), Equatorial Guinea (16%), Senegal (10%) and Ecuador, Bolivia, Dominican Republic, Cuba and Ruanda (5% each). Ten patients had gastrointestinal symptoms, including diarrhea and/or abdominal pain. Six patients were asymptomatic and the rest showed symptoms as fever or hypereosinophilia that could be attributed to other causes. Eleven patients had a coinfection for E. histolytica, two for A. lumbricoides, two for T. trichuria and two for S. stercoralis. Three patients had underlying diseases (2 cases Virus Hepatitis C infection and one case HIV infection). All patients improved with metronidazole for ten days. Conclusions: The association of clinical symptoms and B. hominis could not be delineated from our study due to presence of coinfections. However all of the patients improved with specific therapy for B. hominis. More studies from different areas are needed in order to delineate the clinical significance of B. hominis.