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CLINICAL FINDINGS IN PATIENTS WITH ACUTE AMEBIC PROCTOCOLITIS AND EFFICACY OF COMBINED THERAPY WITH *SACCHAROMYCES BOULARDII*

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ABSTRACT

Intestinal amebiasis has a worldwide distribution and is common in tropical and subtropical areas. In this prospective 7-month study, we studied the main clinical findings in patients with acute amebic proctocolitis and the efficacy of *Saccharomyces boulardii* (SB) treatment of these patients. Initially, 57 cases with acute amebic proctocolitis were selected. The maximum occurrence of infection was found to be in the 30-39 year old age group. The patients were then randomized to two therapeutic regimens. The first included metronidazole 750 mg P.O. tid X10 days and iodoquinol 630 mg P.O. tid X10 days, and the second was the latter plus *S. boulardii* 250 mg P.O. tid × 10 days. The diarrhea, abdominal pain and fever were significantly decreased after initation of therapy in patients receiving regimen II as compared with patients of regimen I. Four weeks after the end of treatment, the two groups were examined for carrier states (presence of amebic cysts in stool, without symptoms). In regimen I, the percentage of carriers was 19.4%, but in the patients who received regimen II, no carriers were found (P= 0.025).

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Keywords: Intestinal amebiasis, *S. boulardii*, Metronidazole, Iodoquinol.

INTRODUCTION

Intestinal amebiasis is an acute or chronic disease caused by the protozoa *Entamoeba histolytica*. The organism lives as a commensal and feeds on intestinal contents without invasive property but it may invade the intestinal wall, causing dysentery of variable severity. The organism can also spread from the intestine to the liver and other body organs.[1-4] The disease has a worldwide distribution but in tropical and subtropical regions with low hygienic standards, the illness manifests clinical symptoms.[5]

Several clinical forms of intestinal amebiasis exist. These include asymptomatic and symptomatic noninvasive infections as well as acute proctocolitis (dysentery), fulminant colitis with perforation, and ameboma. The aim of the present study is to examine the clinical signs in patients with acute proctocolitis (dysentery) and the efficacy of combined therapy with *Saccharomyces boulardii* (SB), a saprophytic yeast and antiamebic drug.

MATERIALS AND METHODS

The study consisted of two stages. In the first stage, a

Table 1. Protocol of therapy.

Regimen I:	Metronidazole	750 mg PO tid X10 days
	Iodoquinol	630 P.O. tid X10 days
Regimen II:	Metronidazole	750 mg P.O. tid X10 days
	Iodoquinol	630 mg P.O. tid X10 days
	Saccharomyces boulardii	250 mg P.O. tid X10 days

prospective study of seven months duration on 57 patients suffering from acute intestinal amebiasis (acute proctocolitis) based on the presence of trophozoites in fresh fecal samples and flotation test and culture was performed. In the second stage, the patients were divided into two groups in a randomized fashion based on the drug regimen which they were to receive (Table I).

Saccharomyces boulardii lyophilized capsules under the trade name of "Ultralevure" was purchased from Bio-Cedex, Montrougo, France. Direct examination of fresh stool samples and flotation test were performed on patients two and four weeks following treatment.

RESULTS

Age and sex distributions of the patients with acute amebiasis are depicted in Figure 1. Patients of both sexes in age group 30-39 represented the largest number, with males being more frequent. Clinical manifestations are shown in Fig. 2.

Comparison of the results obtained from patients on regimens I and II revealed that diarrhea ceased 48 hrs following the beginning of therapy in patients receiving regimen I and 12 hrs after initiation of therapy in patients on regimen II. In patients receiving regimen I, fever and abdominal pain disappeared 24 hr after beginning of therapy, while the same symptoms in patients on regimen II subsided following 12 hrs. In both groups headache persisted for 24 hrs (Table II).

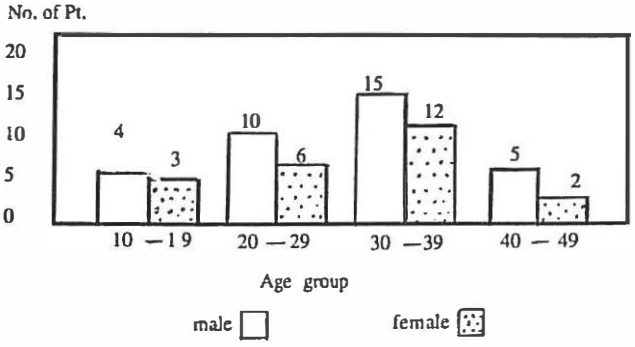

Fig. 1. Number of patients according to age group and gender.

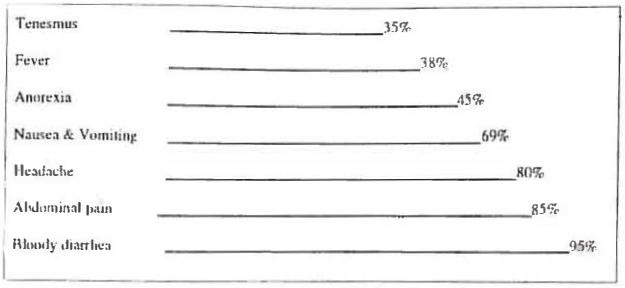

Fig. 2. The frequency of various clinical manifestations in 57 patients with acute intestinal amebiasis.

Table II. Comparison of results obtained in the two groups.

Symptoms \ Group	Regimen I 27 cases	Regimen II 27 cases	P Value
Diarrhea	48 hrs	12 hrs	0.0001
Fever	24 hrs	12 hrs	0.053
Abdominal pain	24 hrs	12 hrs	0.0001
Headache	24 hrs	24 hrs	1.0

Table III. Duration of cyst excretion in stool after treatment.

Duration \ Type of regimen	Regimen I 27 cases		Regimen II 27 cases	
	Cyst passers	%	Cyst passers	%
Two weeks after therapy	2	7.4	0	0
Four weeks after therapy	3	12	0	0
Total	5	19.4	0	0

Stool examinations were performed on 27 patients in each group two and four weeks after termination of treatment. Two patients in group I passed cysts for two weeks following termination of therapy. None of the patients in Regimen II passed any cyst during the same period. (Table III).

DISCUSSION

Intestinal amebiasis is an infection of the large bowel caused by *Entamoeba histolytica*. Although asymptomatic, the infection may manifest various signs from a mild chronic

form to an acute and severe dysentery. Involvement of the mucosal layer by the organism leads to ulcerative lesions and clinical symptoms.[3,8] *Saccharomyces boulardii*, a nonpathogenic yeast, has been widely employed to treat bacterial diarrhea, i.e. shigellosis, antibiotic-associated and viral diarrheas in Europe.[4] The mechanism by which SB exerts its therapeutic effect has not been clarified, but on the basis of animal experiments two mechanisms have beed proposed. One is the antagonistic effect of SB against the intestinal pathogens and the other inhibition of cytotoxic effect or a decrease in the production of toxins by microbial pathogens. SB augments host resistance through activation of complement and stimulation of the reticuloendothelial system;[3] it may stimulate the production of secretory IgA, a major component of the humoral immune system, which binds to foreign antigens as the first line of host defence.[3] Other studies have demonstrated that SB interferes with bacterial multiplication.

To our knowledge a similar study on the effect of SB on intestinal amebiasis has not previously been reported. The study also shows the efficacy of SB in combined treatment of intestinal amebiasis in reducing the carrier state in humans.

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