

## EFFICACY OF VARIOUS DRUGS IN TREATMENT OF GIARDIASIS: COMPARATIVE STUDY

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### S U M M A R Y

A total of 195 patients with giardiasis were treated with four of the most commonly used drugs for this parasitosis. All drugs were used in their usual posologic schedules. The cure rates achieved with furazolidone, nimorazol, metronidazol and tinidazol were, respectively, 71.7%, 94.1%, 86.9% and 96.7%, while in a control group without any medication only 34.8% of patients showed negative stool exams. Tinidazol did not produce any side-effects, which were of minor importance with nimorazol and metronidazol and somewhat more frequent and severe with furazolidone.

### I N T R O D U C T I O N

Treatment of giardiasis has gained greater importance in recent years, when new aspects in the pathogenesis of this intestinal parasitosis have become better known, and evidence has shown that it can be quite damaging to the host, specially in the cases of intense infections in younger children<sup>6,9</sup>. Nevertheless, reports concerning the treatment of giardiasis have been less common than those regarding intestinal helminthiasis, and there is an evident lack of information of the comparative properties of the various drugs, specially the more recent ones<sup>2,3,4,5,7,8,10,11,12,13</sup>. The present study was undertaken to determine the advantages and disadvantages of the drugs most commonly used for the treatment of giardiasis.

### M A T E R I A L S A N D M E T H O D S

One hundred and ninety five patients with recently detected giardiasis were treated with different drugs. All of them lived in the suburbs of São Paulo, from low socio-economical families.

No distinction was made concerning age, sex or race.

The stools were examined by the method of FAUST & col.<sup>1</sup> on the seventh, fourteenth and twenty-first days after the end of the treatment. Only patients whose three repeat exams were all negative were considered cured.

Careful inquiries of side-effects were made when the patients returned for the results of their exams.

All drugs were administrated in their most commonly used therapeutic schedules (Table I). The control group did not receive any medication.

### R E S U L T S

Table II summarizes the therapeutical results.

Tinidazol was best tolerated without a single side-effect. Nimorazol and metronidazol were also well tolerated with only 14.3% and 11.4% of complaints, respectively, such as minor gastro-intestinal symptoms. With furazolidone, 18.2% of the patients presented side-effects, usually moderate gastro-intesti-

T A B L E I  
Drug and dosages used for the treatment of giardiasis

Drug	Dosage	Period of treatment
Furazolidone	8 mg/kg/day (t.i.d.)	7 days
Nimorazol	1-5 years — 125 mg/b.i.d.	5 days
	6-10 years — 125 mg/t.i.d.	5 days
	Over 10 years — 250 mg/b.i.d.	5 days
Metronidazol	1-5 years — 125 mg/b.i.d.	7 days
	6-10 years — 125 mg/t.i.d.	7 days
	Over 10 years — 250 mg/b.i.d.	7 days
Tinidazol	150 mg/b.i.d. (adults only)	7 days

T A B L E I I  
Therapeutical results with the various drugs used for the treatment of giardiasis

Drug	No. of patients treated	No. of patients cured	Cure rate (percent)
Furazolidone	53	38	71.7
Nimorazol	51	48	94.1
Metronidazol	38	33	86.9
Tinidazol	30	29	96.7
Control group	23	8	34.8

nal upset lasting a few days; one patient developed hives and another had to interrupt treatment because of intense headaches.

#### DISCUSSION

Our results demonstrate that furazolidone has lower cure rate than the other three drugs, as well as more frequent and intense side-effects. On the other hand, its very low cost, when compared to the other drugs, makes it one of the drugs of choice in the treatment of giardiasis.

Metronidazol, nimorazol and tinidazol may be considered very effective and well tolerated. The only disadvantages are the high cost and the longer treatment schedule, ranging from five to seven days. Shorter schedules should be tried, and if they prove to be equally efficient, mass treatment will be much easier. As a preliminary information, we have treated 20 patients with a single-dose of 2 g of tinidazol, and all were cured of their infection. We hope that other studies will confirm this information, as single-dose treatment should offer distinct advantages in the treatment of giardiasis.

#### RESUMO

##### Eficácia de vários medicamentos no tratamento da giardíase: estudo comparativo

Cento e noventa e cinco indivíduos com giardíase foram tratados através de quatro medicamentos comumente usados para curar essa parasitose. Houve utilização de esquemas posológicos habitualmente considerados como apropriados e as porcentagens de curas proporcionadas pela furazolidona, pelo nimorazol, pelo metronidazol e pelo tinidazol corresponderam, respectivamente, a 71,7%, 94,1%, 86,9% e 96,7%, sendo que idêntico sistema de controle não mais evidenciou a infecção em 34,8% dos componentes de um grupo de pessoas que não receberam qualquer droga. As manifestações colaterais registradas, de modo geral pouco expressivas, transitórias e relacionadas com o aparelho digestivo, com maior frequência decorreram da administração do remédio primeiro citado, sendo que a melhor tolerância teve relação com o emprego do quimioterápico por último referido.

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