Clinical evaluation of tinidazole in amoebiasis in children

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Ahmed, T., Ali, F., and Sarwar, S. G. (1976). *Archives of Disease in Childhood*, 51, 388. **Clinical evaluation of tinidazole in amoebiasis in children.** Forty children with symptomatic intestinal amoebiasis were treated with tinidazole in a single dose of 50 mg/kg for 3 consecutive days. A cure rate of 97% was obtained. Tinidazole was tolerated well in children and proved to be a valuable new amoebicidal drug.

Amoebiasis is common in the paediatric age group in Bangladesh (a case has been documented in a 2-month-old infant) though hepatic amoebiasis is extremely uncommon. The need for a more effective and safe amoebicidal compound is clear and research has recently yielded some promising drugs.

A new compound, tinidazole, is chemically related to metronidazole. Tinidazole is an ethyl sulphone which has been found effective in amoebiasis, trichomoniasis, and giardiasis (Andersson, Forssell, and Sterner, 1972). The structural formula is as follows:

Material and methods

We present our findings with tinidazole in 40 paediatric patients admitted over a period of 9 months. Their ages ranged between 8 months and 10 years; 21 were male and 19 female. The presenting symptomatology in most cases were loose motions with mucus and/or blood, abdominal pain, and fever. The criterion for diagnosis of intestinal amoebiasis was the demonstration of vegetative or cystic forms of *Entamoeba histolytica* in fresh stools. Stool and other clinical examinations were repeated on post-treatment days 6, 11, and 30.

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Hb, total leucocyte counts, and differential leucocyte counts were recorded in all cases, and transaminases before and after the treatment period in some. The dosage of tinidazole was 50 mg/kg per day by mouth in a single dose for 3 consecutive days.

The patients were hospitalized throughout the treatment period. A record of clinical signs and symptoms before and after therapy, and of any side effects during the treatment period was maintained for each case. The patients were followed up for a minimum period of 4 weeks after treatment.

Results

The therapeutic response to tinidazole was assessed clinically and parasitologically as shown in Tables 1 and II

TABLE I
Clinical assessment of 40 children with amoebiasis treated with tinidazole

No.	Symptoms disappeared by day 6	Symptoms disappeared by day 11	Symptoms disappeared by day 30
40	14 (35%)	33 (82.5%)	39 (97.5%)

TABLE II
Parasitological assessment of 40 children with amoebiasis treated with tinidazole

No.	Parasites cleared by day 6	Parasites cleared by day 11	Parasites cleared by day 30
40	40 (100%)	40 (100%)	40 (100%)

Evaluation of therapy ideally should follow the criteria recommended by the World Health Organization (1969) in terms of (1) disappearance of symptoms, (2) disappearance of *Ent. histolytica*, (3) healing of ulcers. But sigmoidoscopic examination of children being difficult, the progressive healing of ulcers could not be recorded. The clinical cure rate came to 97.5% and parasitological cure rate to 100%. Cases with entamoeba cysts in the stools were rendered parasite free by day 6, indicating the efficacy of tinidazole in this form of infestation.

Unlike other amoebicidal drugs, tinidazole proved to be well accepted by paediatric patients because of ease of administration by single dose, and the shortness of the course. However, mild and transient side effects were noted in 6 patients, in the form of nausea, constipation, vomiting, and abdominal discomfort, though never necessitating stopping treatment. Haematological checks performed in

all patients, and liver function tests carried out in some patients were normal.

Discussion

Amoebiasis is a major public health hazard, particularly in most of the tropical countries. Proper emphasis is seldom given to amoebiasis among children due to a tendency to underestimate its incidence. We conclude that tinidazole given in a dose of 50 mg/kg for a short course of 3 days is an effective means of treating amoebiasis in children, is safe, and has only mild side effects.

REFERENCES

- Andersson, T., Forssell, J., and Sterner, G. (1972). Outbreak of giardiasis: effect of a new anti-flagellate drug, tinidazole. *British Medical Journal*, 2, 449.
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