

Albendazole Therapy in Ascariasis

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Abstract

Patients in the paediatric age group with moderate to severe intestinal ascariasis were treated with various antihelminthic drugs. Albendazole, Pyrantel pamoate and Levamisole were used. Comparison of the percentage cure rate, was made and albendazole was found to be the most effective in 92.26% of patients followed by pyrantel pamoate and levamisole in 80.82% and 64.70% of the patients respectively.

Key words

Ascariasis, Albendazole.

Introduction

Ascaris lumbricoides is an intestinal parasite cosmopolitan in distribution with an overall infestation incidence of a quarter of the total population (1). In the valley of Kashmir, the incidence of ascariasis has been observed in 85.10% and 80.0% of patients in the age group of 6-15 years (2-3). It affects children from socio-economic groups whose standards of living and personal hygiene are at the lowest (4).

Worm infestation is a glaring example of one of the so many potentially morbid conditions which are being ignored, but these seemingly innocuous conditions when left untreated can present with a grim phenomenon. Prevention and cure is simple, but ignorance towards the same can lead to a serious sequelae especially in children. The aim of this study has been to determine the best antihelminthic for prevention and cure of ascariasis, with regard to ease of administration easy availability, require no purgation and associated with least degree of side effects.

Material and Methods

The study was conducted in the Department of Surgery over a period of five years. Two thousand and four hundred patients (60.38% male and 39.62% female) aged upto 14 years suffering only from moderate to severe intestinal ascariasis were taken for the study. These were the patients who had not received antihelminthics three months prior to commencing of study, had no active illness, epilepsy, known hypersensitivity to any drug, generalized skin lesions or proteinuria. A detailed clinical evaluation, was done in all the patients. Antihelminthics were used 12-24 hours after the patient was free of symptoms/signs such as pain abdomen, palpable worm mass, sign of obstruction and was tolerating orals with no vomiting. Post operative patients were dewormed after 8th post operative day. 565 patients did not come up for regular follow up and were excluded from the study.

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Albendazole 400 mgm stat above 2 years of age and 200 mgm below 2 years of age was given to 928 patients. Pyrantel Pamoate 10 mgm/kg of body weight was used in 584 patients, and Levamisole was used as 4 mgm/kg of body weight in 323 patients. Three stool examinations were done on every patient 2 weeks after the treatment. Infection was considered to be cured when all the three stool examinations for ova adult worm of ascaris were negative. Mebendazole was not used because of its prolonged course and majority of the patients were drug defaulters. Piperazine was abandoned because of its heavy dose and major side effects.

Results

Percentage cure rate with albendazole, pyrantel pamoate and levamisole is given in Table 1. The adverse effects encountered were minimal and did not require withdrawal of therapy. However, in 42 patients with severe vomiting immediately after therapy, the course was repeated 2 days later. The percentage cure rate of 92.26% with albendazole was not significant statistically (Chi Square Analysis).

Table 1 Antihelminthic drugs used and the percentage cure rate

Drugs used	No. of patients	No. of patients cured	Percentage cure rate	Statistical analysis
Albendazole	928	861	92.26	NS
Pyrantel Pamoate	584	472	80.80	NS
Levamisole	323	209	64.70	NS

Comments

Albendazole which exerts antihelminthic activity by interfering with the normal metabolic functioning of the parasite, selectively blocks the glucose uptake by adult helminth, which leads to endogenous depletion of glycogen stored within the parasite and this in turn causes a decrease in the formation of adenosine triphosphate which is essential for the survival and reproduction of helminth, was found to be the most effective and an ideal antihelminthic drug.

Albendazole as suspension and tablet form has also been used with percentage cure rate of 89.00%, 91.09%, 96.04%, 95.03% and 95.03% respectively (5-9). The higher figures of cure rate in some studies is at variance with the present study, probably the severity of infection was not graded in all and the number of patients studied is far less than the present study. Our observations are at variance with others, who observed pyrantel pamoate to be the most effective against *ascaris lumbricoides* (10).

We hereby conclude that albendazole should be the drug of choice in all patients infested with *ascaris lumbricoides*. It should also be used for prophylaxis as single stat dose at 2 monthly interval.

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