

TREATMENT OF HUMAN TAPEWORM INFECTIONS WITH YOMESAN SINGLE DOSE TREATMENT IN NON-FASTING SUBJECTS

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In a previous trial 'yomesan' (niclosamide) was shown to be an effective, safe and simple remedy for tapeworm infection in man.¹ The drug was given after an overnight fast in a dose of 1 G., repeated after one hour, i.e. a total dose of 2 G. In this paper we report the results of administering yomesan in a single dose of 2 G. without fasting the patient.

SUBJECTS AND METHODS

Twenty adult African subjects with *T. saginata* infection were studied. Four were outpatients whose only complaint was the tapeworm infestation; the remaining 16 were in-patients suffering from a wide variety of more or less serious medical and surgical conditions, and the tapeworm infection was an incidental finding.

Yomesan was given in a single dose of 2 G. about 2-4 hours after breakfast, which usually consisted of maize meal porridge and milk, 1-2 slices of bread with butter or jam, and coffee. The drug is put up as vanilla-flavoured, 0.5 G. tablets, and patients were instructed to chew these well before swallowing with a little water. Two hours later 1 oz. of magnesium sulphate was given, and all stools passed over the next 8-24 hours were collected. Patients defaecated directly into a large round tin containing a solution of 10% formalin in saline to facilitate the preservation of the head and segments of the worm. These were recovered by washing the stool through a fine sieve.

All patients were followed up for a period of at least 4 months after therapy. For this purpose we employed a trained African social worker, who visited the patients in their homes, questioned them carefully about the passage of segments in the stool, and collected specimens of stool which were examined for segments and ova. All stool specimens were concentrated by the merthiolate-iodine-formalin method before examination for ova.

Proof of cure was based on: (1) The absence of segments in the stool for a period of at least 4 months after therapy, and (2) the absence of both segments and ova in the stools obtained at 4 or more months after treatment.²

RESULTS

No heads were found in the stool specimens after the purge. Fifteen subjects expelled the whole worm except the head, while 1 passed 15 segments of the parasite. In the remaining 4 patients stools were not obtained for examination. Three were outpatients who left the hospital before the purgative was administered or before the purga-

tive had acted; the fourth was an inpatient in whom the purgative failed to act.

Follow-up studies showed that none of the 20 subjects passed segments in the stool for a period ranging from 4 to 6 months after treatment. In addition, in all 20 cases, stool examinations at 4 or more months after therapy were negative for both segments and ova. The treatment was free of side-effects.

DISCUSSION

Yomesan cured all 20 patients in this series. The reason for our failure to recover the head of the parasite is probably the following: There is good evidence that the action of yomesan is taenicidal, which means that the dead worm will be digested by the enzymes of the intestine or faecal flora, unless it is rapidly expelled and immediately fixed and preserved after passage. Our attempts to do this by purging with magnesium sulphate and fixing with formalin, usually resulted in recovery of the entire worm except the head. This strongly suggests that the head is particularly liable to undergo digestion while still within the intestine. This is not surprising considering that the head is the smallest part of the worm, and, because it is situated most proximally in the intestine, is the first to be exposed to the lethal action of the drug.

The high cure rate in this trial was obtained with a single dose of yomesan in subjects who were not fasting. Furthermore, side-effects were not observed, despite the fact that most of the patients treated were also suffering from a variety of more or less serious medical and surgical diseases. These findings fully confirm our earlier assessment that yomesan is the drug of choice in tapeworm infection.¹

SUMMARY

Twenty subjects with tapeworm infection were treated with yomesan. The drug was administered in a single dose without fasting the patient. All the subjects were cured and no side-effects were observed.

We wish to thank Dr. W. H. F. Kenny, Acting Superintendent of Baragwanath Hospital, for permission to publish; Miss L. Heuberger, Mrs. F. le Roux and Miss S. Krasin for technical assistance; Mr. L. R. Mzolo for the industry with which he followed up the patients; and FBA Pharmaceuticals (S.A.) (Pty.) Ltd., local subsidiary of Farbenfabriken Bayer AG, Leverkusen, which supplied the yomesan tablets and sponsored the trial.

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