Clinical and other Notes.

THREADWORMS AND PRURITUS ANI.

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The following letter, addressed to the Editor of the British Medical Journal, is republished with his permission:—

SIR,—In some recent correspondence in your columns regarding pruritus ani, I have seen no mention of the threadworm Enterobius vermicularis. Many practitioners, in my experience, believe that the threadworm is an unlikely cause of pruritus ani in adults in this country, and that the parasite if present, could hardly be overlooked. Unfortunately, neither of these suppositions is true. In support of this assertion I may mention that at the moment of writing I have under treatment four adults suffering from this distressing complaint, in each instance acquired in England. The symptoms had lasted, before diagnosis, for from a year and a half to eight years, during which periods the sufferers had had repeated examinations, including sigmoidoscopy, and had received treatment from physicians, dermatologists and radiologists, without permanent benefit, and without the cause of the irritation having been discovered. Three of the four had been advised to undergo surgical operation as a last resource.

I submit that in any case of nocturnal pruritus ani the first cause to be excluded is Enterobius. For practical purposes it may be taken that an active nocturnal pruritus which is stopped instantly by a rectal injection of strong salt and water, and which remains absent for the rest of the night, is due to threadworms. In cases of long standing, however, more exact diagnostic methods are available. Eggs may be found in the faeces, but are often absent. They are more readily detected in scrapings from the neighbourhood of the anus. But it is most satisfying to the patient if the parasites themselves are demonstrated. In one instance the suggestion that Enterobius might be the responsible agent was not warmly received by the medical attendant, who attributed the trouble to some obvious hemorrhoids. Accordingly I visited the patient’s house after he had retired to bed, and, when the pruritus commenced, a quick local examination with the help of an electric torch resulted in the capture of three female Enterobius. Or the worms may be looked for in a returned enema, administered when the irritation is present. A bed-pan or similar receptacle should be employed, because the worms usually sink at once in water and are extremely difficult

1 B.M.J., June 28, 1930. Correspondence.
to detect in an ordinary closet pan, especially so as most of the worms passed are contained in the first ounce of fluid returned.

The most important point in treatment is to prevent auto-infection by the mouth, this being the cause of persisting infestation. It is not enough for the patient to wash his hands before meals and after defecation, as is commonly advised; they must also be scrubbed thoroughly when he wakes in the morning—for the early cigarette and morning cup of tea are particularly dangerous—and again, whenever the skin of the body, or any article of underclothing, has been touched. I have recovered fragments of a worm and several dozen eggs from a single finger nail, and have found a crushed gravid female on an under-garment. Thus it is easy to see how eggs may be smeared all over the surface of the body.

The simplest curative treatment in my experience is rectal injections of salt and water, two tablespoonfuls of kitchen salt to the pint. If this causes griping, reduce the quantity of salt by half, but discomfort after injection is generally due to failure to expel all the air from the apparatus employed. The patient must be taught to give the injections himself, for these are properly effective only when pruritus is felt. An infant's 2-ounce enema bulb is all that is required. The patient lies down with the pelvis raised and injects the fluid; then, without rising, he refills the bulb and repeats the injection once. I have tried giving larger quantities of fluid, and employed more elaborate apparatus, but the results were no better, nor could I find any advantage in giving a preliminary simple enema. When the fluid is passed out the pruritus ceases at once, and the patient feels nothing more until the following night. Sometimes the treatment has the effect of making the worms return to the rectum earlier than usual the next day. Thus, if the nightly irritation previously began between 10 and 11 o'clock, on the day following a wash-out it may be felt about 6 or 7 in the evening. With a little practice the whole process takes only a minute or two, and patients who have been tortured nightly for years will be found extremely grateful for so simple a means of securing undisturbed sleep.

I have obtained cure with a week's treatment; usually, however, the wash-outs have to be continued for about six weeks, but given only when pruritus is felt. Within this period all the developing females should have reached maturity and migrated to the rectum. Infestation persisting for more than six weeks suggests self-infection. I have never had reason to suspect any multiplication of the parasites within the body.

Anthelmintics are helpful in reducing the number of worms, but they cannot be relied on to reach those inhabiting the cæcal pouches and appendix. It is suggestive that the drugs usually recommended either have a laxative action themselves or are given combined with purgatives. To one man who had not had a night's unbroken rest for several months, I gave as an experiment one day's treatment with santonin and calomel (santonin 2 gr., calomel $\frac{1}{2}$ gr., t.i.d.). This had a sharp purgative effect.
and the patient remained free from irritation for about a week. The worms expelled were passed alive, suggesting that the calomel was the active agent. Sufferers from an unrecognized threadworm infection often attribute the irritation to constipation, as they have observed that a sharp action of the bowels gives temporary relief.

Sometimes persons in seeking treatment for some late reflex phenomenon due to Enterobius omit all mention of pruritus, having been assured that this latter symptom is due to hemorrhoids, constipation, &c. I have had this experience in the case of patients who, respectively, complained of frequency of micturition, gastric hyperacidity, and passage of large quantities of mucus. The sufferer from the last-named complication, having recently returned from the East, had diagnosed it as dysentery, a supposition supported by the occasional appearance of a trace of blood, which came from excoriations around the anus.

For convenience I have called the anal irritation “pruritus.” As a matter of fact, the sensation experienced by the subject of infestation with Enterobius is not really an itching, but an intolerable, light, rapid tickling caused by the movements of the worms.

I am, &c.,

W. P. MacArthur.

Royal Army Medical College, S.W.1.
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NOTE ON A CASE OF DOUBLE TÆNIA INFESTATION (T. SOLIUM AND T. SAGINATA).

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The patient was an Indian Hospital Corps sweeper of the pariah class (and therefore not bound by the dietetic restrictions observed by higher caste Hindus).

He was admitted to the Indian Section of B.M.H., Wellington, for treatment for tape-worm, having noticed that he was passing segments. After two days on milk diet he was, on October 27, 1929, given 30 min. of ext. filicis liq. at intervals of fifteen minutes for three doses. Two and a half hours later he was given a saline purge.

The resulting two stools were sent to Brigade Laboratory, Wellington, where I examined them and found two heads which, on clearing, proved to be the one a head of T. saginata and the other a head of T. solium.

Camera lucida drawings were made with an improvised camera lucida.

As will be seen, the rostellum was completely retracted in the specimen of T. saginata, a small pore being visible where the retraction has occurred.

The possibility of this specimen being in reality a solium which has