

INTESTINAL PARASITES AND THE DIAGNOSIS OF NEURASTHENIA

By WM. ALLAN, A.B., M.D.

Professor of Parasitology, North Carolina Medical College, Charlotte, N. C.

Our standard text books fail to mention intestinal parasites as the cause of neurasthenia. Neither do they record any of the nervous or mental symptoms that accompany parasitic infection of the intestines.

Ordinarily it would be impossible to confuse the typical cases of uncinariasis or amebiasis with neurasthenia, whatever the nervous or mental symptoms might be, but there are many atypical cases of intestinal parasitism in which the picture is that habitually seen in chronic neurasthenia. For instance, no one would think of a history of ground itch, anemia, esinophilia, constipation with clay colored stools, and muscular weakness as meaning anything but uncinariasis; and in the same way chronic dysentery with anemia, with blood and mucus in the stools, and with painful defecation, means amebiasis. But we see cases of uncinariasis in which there is no history of ground itch, with haemoglobin above 85, and with regular and normal bowel movements; likewise cases of amebiasis without marked anemia, giving a history of perfectly normal bowel movements or slight constipation for a number of years.

These cases are sent to our neurologists as chronic neurasthenics, after going the rounds in their home towns for from one to ten years. They complain of muscular weakness, headache, sleeplessness, depression, irritability, sometimes loss of weight; they tire out mentally very quickly, think and talk about nothing but themselves. They rarely give a voluntary history of indigestion; appetite good or variable. They are all habitual medicine takers and are particularly partial to large doses of calomel and quinine as remedies for "bilious-

ness and a touch of malaria"—that grand old diagnosis that covers anything from gall stones to rheumatism.

Case 1.—A. B. C., white, male, age 30. Native of Florida. Family history negative. For ten years had had biliousness and coated tongue. Says he has been sallow for six years, though to all appearances he is not anemic. For last five years has been below his normal weight. Occasionally constipated, occasionally has diarrhoea. Takes his temperature twice daily and says it runs from 96 to 98.5 F. Six months ago had his appendix removed; his surgeon afterwards told him it was perfectly normal. Appetite variable; sleeps fairly well; easily fatigued mentally and physically; depressed; irritable. Thinks and talks a great deal about his health. Says he has taken medicine pretty steadily for ten years. Had ground itch when a boy.

May 14 case was referred to me for blood examination for malaria. Haemoglobin 90. No malarial organisms. Eosinophiles 10 per cent. Urine negative. Physical examination showed only exaggerated reflexes and some loss of weight. Feces showed a very few eggs of *Necator Americanus*.

May 16. Patient threw away his thermometer and took thymol grs. 30. Less than a dozen worms were seen.

May 19. Feces still showed eggs. Thymol, grs. 30. A few worms recovered.

July 20. Feces showed no eggs. Thymol, grs. 60. No worms recovered. Patient has gained seven pounds; still has coated tongue, but says he feels stronger and better than he has in years.

Case 2.—Mrs. C., white, female, age 34.

Wife of Presbyterian divine. Native of eastern North Carolina. On July 5 case was brought to me for a blood examination for the sake of the mental effect the procedure would have. Blood showed haemoglobin 65, eosinophiles 10 per cent. Inasmuch as the patient looked anemic and gave a history of chronic constipation for which she took purgatives regularly, hook worm was suspected and a constipated stool was requested. In looking over a semi-solid stool next day for eggs, amebae and monads were seen. Patient was ordered to the hospital and put on routine dysentery treatment. After the initial dose of salts amebae and monads were plentiful in the stools.

She gave a history of malaria over twelve years ago followed by dysentery lasting six weeks. Married eleven years; four children and one miscarriage. Youngest child thirty-four months old. Slight perineal laceration at the birth of first child. Menses were irregular a year ago, but have been regular for the last eight months. Backache, headache and depression precede the menstrual flow. After birth of third child five years ago was weak for a long time and has been very nervous and anemic ever since. Appetite good; sleeps well; tires easily; complains of constipation and sick headache. Has never been strong during the last twelve years.

Physical examination negative; urine negative.

Case 3.—J. D. S., white, male, age 20. Native of Anderson County, S. C. (In the sand belt.) Farmer. Seen in consultation with Dr. S. M. Crowell, July 22. Case had been sent

to him as a chronic neurasthenic with a tentative diagnosis of beginning of locomotor ataxia.

Family history showed a variety of nervous afflictions in the past three generations.

Past history: Ground itch off and on for the last ten years. For past six years has been treated for nervous indigestion. Had measles four months ago, followed by hoarseness and three weeks' diarrhoea. His indigestion and nervousness have become very much worse. Feels cold and numb. Thinks he is turning dark. Says feet feel like a fish. Has enormous appetite. When he goes to bed at night feels as though something was closing down on him. Says at night his eyes stare and jerk from side to side, etc. Talks in a loud voice. gets very confidential, cries at times and is often depressed. Enjoys rehearsing his symptoms. Smokes cigarettes almost continuously.

Physical examination negative except that skin looks a muddy yellow: Blood: Haemoglobin 70, eosinophiles 6 per cent. Urine normal. Feces: Light yellow, pastey. Full of eggs of *Necator Americanus*.

July 23. Thymol, grs. 60 administered and 151 worms recovered.

Conclusions: Intestinal parasitism is a frequent cause of chronic neurasthenia and at times the pronounced nervous and mental symptoms entirely overshadow the vague symptoms of intestinal invasion. In view of the wide prevalence of intestinal parasites in the South, a haemoglobin estimation, a differential count for eosinophiles, and a microscopical examination of the feces are essential before a diagnosis of primary chronic neurasthenia is justified in this latitude.