

Illness and Intestinal Parasites

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Non-specific gastrointestinal symptoms and persistent diarrhea may indicate intestinal parasites, a diagnostic possibility generally not tested for in the clinician's office. Usually a stool sample is sent to a laboratory where special staining techniques and considerable expertise is needed in identifying any parasites present. A rectal swab method modified from a previous procedure is used at the Center to rapidly and accurately diagnose parasites from rectal mucus. The swab is collected by the physician, placed in a tube containing transport media and sent to the laboratory. The tube is centrifuged and stained with a fluorescent stain, acridine orange. This technique is of particular value in diagnosing *Dientamoeba fragilis*, which has no cyst stage and lives low in the cecum and colon. A comparison of common parasites found in patients at the Center using the rectal swab technique (RST) was higher than that reported by the Kansas State Department of Health which used the conventional parasitology isolation and identification techniques. The Center found an incidence rate in *D. fragilis* of 8.9% (28/313) while the State Department of Health reported an incidence of 0.4% (24/6027). In 377 samples, the Center found *Entamoeba histolytica*, 11.1%; *Giardia lamblia*, 3.7%; *Ascariasis*, 2.1%; and *Hookworm filariform*, 6.9%. The State Health Department reported incidence of 0.2%, 4.5%, 1.5% and 1.9% respectively in 6,027 samples. The following cases demonstrate the success of this technique:

1. A 7-year-old male began having lower left abdominal pain, with episodes occurring both at home and school. The pain lasted from 20 to 60 minutes. When examined, the abdomen was soft with normal bowel sounds, and the child had no fever, diarrhea,

or history of foreign travel. He later experienced a severe episode at school that lasted for several hours. His physician again found negative results and suspected that psychological problems may be involved. The child was seen at the Center where rectal swab testing was performed. Large numbers of *Dientamoeba fragilis* was found. A review of the literature confirmed that *D. fragilis* may be associated with childhood abdominal pain. Treatment was initiated and the child has had no further occurrence of abdominal pain. 2. The next patient, a 50-year-old female, and her two sisters traveled through California where they stopped at a roadside stand, bought and ate fresh peaches. They continued their trip and by the time they reached Colorado, all three had acute diarrhea and abdominal pain. Upon returning to Kansas, the patient visited her physician. Several tests failed to determine the cause of her symptoms. She was seen at the Center and a rectal mucus swab test was performed. Three parasites were found, *Blastocystis hominus*, *Entamoeba histolytica*, and *Ascaris lumbricoides*. Following therapy, her symptoms disappeared and she is still symptom free four months later.

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