

Diagnosis of Giardiasis

Pages with reference to book, From 250 To 250

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Giardia lamblia (GL), a frequent cause of diarrhoea has often been reported to be a pathogen¹⁻⁴ and giardiasis, an important unresolved, health problem in developing countries. This is perhaps due to the absence of a simple but reliable test for its diagnosis. Choice of diagnostic tests depend on their simplicity, feasibility and acceptability to the patient. When suspected on symptomatology diagnosis can be done by detection of trophozoites or cysts of GL on routine stool examination⁵⁻⁷. Although simple and convenient but some cases can be missed on direct microscopy. Its positivity varies from 36-50% mainly due to periodicity of its excretion and delay in examination of stool⁸⁻¹⁰. To increase the yield of direct microscopy three consecutive stools should be examined within one hour after defaecation¹¹. For detection of cysts yield of concentration method is better than direct microscopy. Immunofluorescence test for the detection of giardia antigen in fecal samples picks up 12% more true positive cases than other methods (unpublished data). It detects both cysts and trophozoites and immediate examination is not essential. This should be done in patients with strong clinical suspicion of giardiasis and repeated negative routine stool tests. Other diagnostic tests for the detection of giardia antigen in stools is enzyme linked immunosorbent assay (ELISA)¹². It can detect both cyst and trophozoite and remains positive at dilutions at which GL are not directly visualized¹³⁻¹⁵. ELISA is not a substitute for direct microscopy but it can rule out infection with GL and monitor response¹⁶ to therapy. Counter immunoelectrophoresis (CIE) is also used for diagnosing giardiasis as well as monitoring chemotherapeutic effect of anti- giardia agents¹⁷. Other tests are based on the knowledge of natural habitat of GL in the duodenum and upper jejunum. String¹⁸ test direct microscopy of fresh duodenal aspirate collected during endoscopy¹⁹, duodenal jejunal mucosal imprints and detection of parasites in the intestinal mucous in small intestinal biopsies have been reported with various frequencies^{20,21}. Although there are different methods for diagnosing giardiasis but no single method is 100% reliable. The best approach for the detection of GL should be three consecutive stool examinations, if found negative other methods of detection of giardia antigen like immunofluorescence test, ELISA or CIE methods should be used in patients having symptoms of giardiasis.

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