Chronic Intestinal Schistosomiasis Could Be Mistaken for Irritable Bowel Syndrome

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Abstract: Introduction: Irritable bowel syndrome (IBS) is a common medical disorder, reported to occur in 10-20% of the adult population. However, IBS might be a presentation of another intestinal disease acute or chronic. In a previous study of an endemic area of schistosomiasis, 17% of patients who reported lower gastrointestinal tract symptoms, similar to symptoms of IBS, were found to have schistosomiasis. **Objectives:** To assess the incidence of chronic intestinal schistosomiasis in cases coming from endemic areas of schistosomiasis with a clinical diagnosis of IBS. **Materials and Methods:** This prospective study included 90 patients with initial diagnosis of IBS and is coming from endemic areas for schistosomiasis. All patients were planned for a stool analysis, CBC, serum schistosomal antibody and antigen titres, and a colonoscopy and tissue biopsy for shistosomal ova in those with a positive serology testing. **Results:** The most common presenting symptom was recurrent abdominal pain/discomfort in all patients, diarrhea dominant. Stool analysis was negative for schistosomal ova for the whole studied population. A positive sero-diagnosis of schistosomiasis was made in 24 (26.7%) patients. All patients with positive sero-testing (24 patients) had a colonoscopy; with the commonest finding of a flat or slightly raised whitish/yellowish nodules and recto-sigmoid biopsies for a histopathological diagnosis. Most common finding was chronic active schistosomal colitis 16 (17.8%). Re-assessment of symptoms in patients with a confirmed histopathologic diagnosis of schistosomal colitis after treatment at 3 & 6 month was done. **Conclusion:** Our study that it shows that patients with IBS living or coming from endemic areas of schistosomiasis have a 17.8% chance of being misdiagnosed as having IBS. **What's new?** IBS as common diagnosis which is sometimes quickly applied on certain patients in whom another disease condition is the real underlying cause, as applies for patients coming from endemic areas for schostosomiasis and are diagnosed as having IBS, these should be revised.

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1. Introduction

Irritable bowel syndrome (IBS) is a common medical disorder, reported to occur in 10-20% of the adult population (1). It is twice as common in women and age of onset is usually second decade (2). Although 1/3 of all cases of IBS involve men, they less frequently seek medical attention (2). IBS is a functional bowel disorder characterized by abdominal discomfort or pain associated with defecation or change in bowel habit and with features of disordered defecation. Chronic, relapsing course, often overlapping with other functional gastrointestinal disorders. Diagnosis is by clinical criteria (the Manning criteria or Rome III criteria), assuming appropriate cost effective exclusion of organic disease. IBS May be classified as diarrhea-predominant or constipation predominant IBS, mixed IBS, or unsubtyped IBS. It Does not predispose patients to other chronic or life-threatening disease and does not shorten the lifespan; however, IBS does disrupt the quality of life. Diagnosis is usually established by the Rome III criteria; however, many patients who do not fulfill the exact criteria may have a variant of IBS and will respond to similar treatment approaches (3). However, IBS might be a presentation of another intestinal disease acute or chronic. In a previous study of an endemic area of schistosomiasis, 17% of patients who reported lower gastrointestinal tract symptoms, similar to symptoms of IBS, were found to have schistosomiasis (4). Previous reports of intestinal schistosomiasis masquerading as IBS are already present (5).

Objectives:

To assess the incidence of chronic intestinal schistosomiasis in cases coming from endemic areas of schistosomiasis with a clinical diagnosis of IBS.

2. Materials and Methods:

This is a prospective study that included 90 patients that presented to the outpatient clinic with abdominal trouble that were initially diagnosed with IBS according to the Rome III criteria with no warning signs. Inclusion criteria included any patient with the diagnosis of IBS and coming from endemic areas for schistosomiasis (mostly rural areas of

Egypt) with a potential for schistosomiasis infection. Exclusion criteria includes patients with a diagnosis for schistosomiasis, patients with alarm signs (progressive pain, pain that disturbs sleep, persistent nausea and vomiting, hematochezia or melena, fecal occult blood positivity, fever, weight loss, or anorexia) that is not compatible with IBS and denotes a more pressing and sinister diagnosis. All patients were planned for a stool analysis, CBC, serum schistosomal antibody and antigen titres, and a colonoscopy and tissue biopsy for shistosomal ova in those with a positive serology testing for schistosomiasis. All cases of IBS were managed appropriately, cases with serological or histopathological confirmation of schistosomiasis were treated with oral praziquantel (40 mg/kg/d PO divided bid for 1 d). Patients with a confirmed diagnosis for schistosomiasis were all followed up for the improvement of their symptoms for a 6 months interval after treatment.

3. Results:

This prospective study included 90 patients with initial diagnosis of IBS and was subjected to the inclusion/exclusion criteria. Their age ranged from15-47 years (mean age31 years). Study included 48 males and 42 females. The presenting symptoms are summarized in table 1, however all patients met the Rome III criteria and the most common presenting symptom was recurrent abdominal pain/discomfort in all patients, diarrhea dominant. Stool analysis was negative for schistosomal ova for the whole studied population. A positive sero-diagnosis of schistosomiasis was made in 24 (26.7%) patients (positive serum schistosomal antibody) from which; 11 patients with active infection (positive serum schistosomal antigen). All patients with positive sero-testing (24 patients) had a colonoscopy and recto-sigmoid biopsies for a histopathological diagnosis; the commonest colonoscopic finding was the presentation of flat or slightly raised whitish/yellowish nodules (results in table 2). Most common histopathological finding was chronic active schistosomal colitis 16 (66.7%) (Results in table 3). Re-assessment of symptoms for the 16 patients with a confirmed histopathologic diagnosis of schistosomal colitis after treatment at 3 & 6 month was done; and the results showed total disappearance of symptoms in 11(68.8%) patients and some improvement in 2 (12.5%) patients and no improvement in 3(18.75%) patients (Table 4).

Table 1. Presenting symptoms.

	N	Percentage(%)
Recurrent abdominal discomfort/pain	90	100%
Relief with defecation	75	83.3%
Onset associated with change in frequency of bowel movement	69	76.7%
Onset associated with change in form of stool	78	86.7%
Passage of mucus	37	41.1%
Bloating and abdominal distention	74	82.2%
Diarrhea dominant IBS	76	84.4%
Constipation dominant IBS	9	10%
Alternating bowel habits IBS	5	5.6%

Table 2. Colonoscopic findings.

Colonoscopic findings*	Number	Percentage %
Normal	7	29.2%
Hyperaemia	6	25%
Flat or slightly raised whitish/ Yellowish nodules	16	66.7%
Loss of vascular pattern	8	33.3%
Ulcerations	2	8.3
Tumor mass	0	0%
Polyp(s)	1	4.2%
Total	24 patients	

*5 patients had a single colonoscopic lesion.
*12 patients had a combination of these findings.

Table3. Histopathologic findings.

	Number	Percentage %
Normal	5	20.8%
Acute schistosomiasis	0	0%
Chronic schistosomal colitis	16	66.7%
Other	3 (2 chronic non-specific colitis – 1 with collagenous colitis)	12.5%

Table4. Response after treatment.

	Number	Percentage% In schistosomal colitis	Percentage in the studied group
Total cure	11	68.8%	12.2%
Partial improvement	2	12.5%	2.2%
No response	3	18.7%	3.3%

4. Discussion:

Irritable bowel syndrome has range of 10-20% in adult population and constitutes 50% of all referrals to a gastroenterologist (6). The syndrome diagnosis 'irritable bowel syndrome is often made on the basis of exclusion, but the question is how many diagnostic tests should be performed in order to establish this diagnosis with a degree of confidence. The potential of the various criteria for distinguishing IBS from organic disease is extremely variable and disappointing. Patients fulfilling IBS criteria have, however, a lower risk of organic disease than patients with abdominal symptoms who do not fulfill the criteria. The same holds true for the diagnostic performance of individual alerting symptoms. These seem to be present frequently in IBS patients in whom there is no underlying organic bowel condition. An organic condition cannot be accurately excluded on the basis of symptom criteria. However, the low prior risk of organic conditions among patients who consult a primary care doctor and who meet IBS criteria argues against exhaustive diagnostic evaluation (7). However, IBS might be a presentation of another intestinal disease acute or chronic. In a previous study of an endemic area of schistosomiasis, 17% of patients who reported lower gastrointestinal tract symptoms, similar to symptoms of IBS, were found to have schistosomiasis (4). Previous reports of cases of intestinal schistosomiasis masquerading as IBS are already present (5). So in our study we prospectively analyzed the incidence of schistosomal colitis that can mimic or can be misdiagnosed as IBS. Our main targeted populations are those presenting with initial diagnosis of IBS according to the Rome III criteria and coming from areas endemic for schistosomiasis with no prior diagnosis of the disease. We found that incidence of schistosomal colitis is 17.8% in the studied group, with a good outcome in symptoms of IBS after treatment of schistosomiasis in 14.4% of the whole group and in 81.3% in patients with chronic schistosomiasis. Schistosomal colonic disease is a major health problem in endemic areas and if not diagnosed and treated early might lead to complications such as chronic intestinal schistosomiasis and hepatosplenic schistosomiasis, which have high morbidity and mortality. The symptoms of colonic schistosomiasis are non-specific and may mimic several other gastrointestinal problems. Colonic mucosa may look normal and biopsies show schistosoma ova (8). This study also showed that the histological findings can be correlated with the endoscopic findings. Conclusion: our study showed that patients with IBS living or coming from endemic areas of schistosomiasis have a 17.8% chance of being misdiagnosed as having IBS, with a chance of cure of colonic schistosomiasis and hence the improvement or disappearance of the IBS symptoms in 14.4%. So in our opinion any patient with IBS specially if diarrhea dominant and has a possibility of being infected with schistosomiasis, should be further investigated with serological testing and colonoscopy and tissue diagnosis as stool analysis is usually negative in chronic cases, for the possibility of schistosomal infection.

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