

Received: 2020.01.31

Accepted: 2020.05.14

Available online: 2020.06.23

Published: 2020.08.07

# Colonic Polyps an Unusual Manifestation of Schistosomiasis

Authors' Contribution:  
Study Design A  
Data Collection B  
Statistical Analysis C  
Data Interpretation D  
Manuscript Preparation E  
Literature Search F  
Funds Collection G

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**Conflict of interest:** None declared

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**Patient:** Male, 24-year-old

**Final Diagnosis:** Large rectal polyps secondary to *Schistosoma* infection • Unusual colonic polyp caused by *Schistoma* infection

**Symptoms:** Abdominal pain • bleeding per rectum

**Medication:** During the procedure: Xylocaine local gel • Midazolam inj • Fentanyl inj;  
For the disease: Praziquantel tab

**Clinical Procedure:** Colonoscopy with endoscopic submucosal resection (EMR) • endoscopic submucosal resection (EMR)

**Specialty:** Gastroenterology and Hepatology • Endoscopy

**Objective:** Report of misleading rare disease to avoid an unnecessary invasive intervention

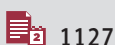
**Background:** Although reports of bilharzial colonic polyps are very rare in the literature, we report a case of a large rectal polyp as a manifestation of chronic intestinal bilharzia. A high index of suspicion in an endemic area is the key factor to avoid unnecessary medical interventions.

**Case Report:** We report a case of a 24-year-old male patient who was married, born in Taiz North Yemen, and worked as a military soldier. He presented to our clinic with a complaint concerning intermittent lower abdominal pain and several months of rectal bleeding. A colonoscopy was performed at the Endoscopy Unit of King Khalid Hospital, Najran, Saudi Arabia on September 23, 2019 and results showed 2 large rectal polyps, (measuring 4×3 and 2×3 cm), located 10 cm from the anal verge, having wide bases and irregular surfaces that mimicked dysplastic polyps. Both polyps became elevated after a normal saline/methylene blue injection. An endoscopic mucosal resection was successfully performed with no immediate complications. The histopathology showed benign polyps due to *Schistosoma*-induced colonic infection.

**Conclusions:** It is very difficult and challenging to differentiate *Schistosoma*-induced colonic polyps from other colonic polyps even with an endoscopic evaluation; thus, a high index of clinical suspicion is required mainly in an endemic area, which may prevent the physician from ordering unnecessary interventions and thus avoid severe complications.

**MeSH Keywords:** Colonic Polyps • *Schistosoma* • *Schistosoma mansoni*

**Full-text PDF:** <https://www.amjcaserep.com/abstract/index/idArt/923177>



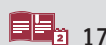
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## Background

Schistosomiasis is one of the debilitating tropical diseases globally, and it is a major cause of morbidity and mortality in the Middle East, Asia, Africa, and South America.

Approximately 250 million people are infected, and 700 million people are at risk of infection. In more than 70 countries the infection is endemic with an estimated 660 million infections are concentrated in Africa, which accounts for 85% of the global at-risk estimated [1–3] *Schistosoma* can affect any site in the digestive tract, but the preferred site is the rectum while the sigmoid is rarely effected, and on occasion, it is found in the other parts of the large and small intestines. The polyp consists of a combination of a vascular neof ormation and an inflammatory reaction to parasite eggs; worm can be found either dead or alive inside the polyp tissue [4] *S. mansoni* may be associated with the sexually transmitted disease as its eggs have been isolated from the condyloma acuminatum of patients with positive tests for human papillomavirus (HPV) in addition to human immunodeficiency virus (HIV) patients [5,6].

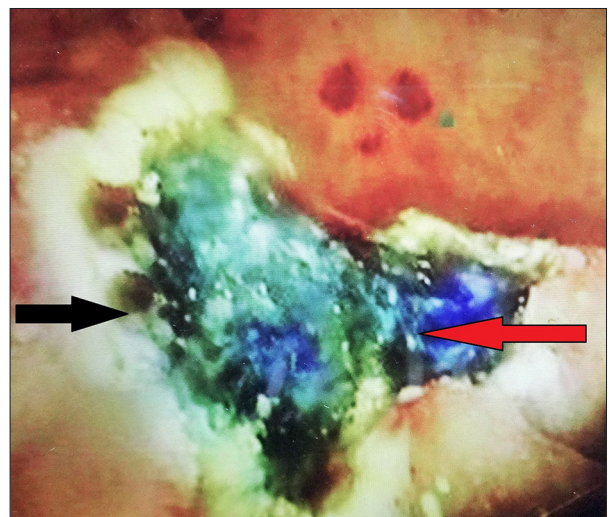
The objective of our study was to report a case of a *Schistosoma*-induced large rectal polyp in an immunocompetent young male, who presented with abdominal pain and bleeding from the rectum, and then was subjected to unnecessary invasive endoscopic management.

## Case Report

We report a case of a 24-year-old male patient, who was married, born in north Yemen, living in Taiz City, and worked as a military soldier. He reported a history of repeated swimming during his adolescence in dams and stream water in the region of Taiz, Yemen. He had a past history of long-standing intermittent abdominal and anal pain after defecation, which he occasionally treated with pain killers and local ointments when he was symptomatic. He presented to our clinic complaining of intermittent lower abdominal pain and rectal bleeding for several months. His general condition was good with a normal body weight and built, no jaundice, no paleness or cyanosis, well-nourished, with normal blood laboratory values, such as renal and liver function tests, and complete blood count in addition to a negative stool examination. A colonoscopy was performed in the Endoscopy Unit of King Khalid Hospital, Najran, Saudi Arabia on September 23, 2019 and results showed 2 large rectal polyps, measuring 4×3 and 2×3 cm, located 10 cm from the anal verge, having wide bases and irregular surfaces that mimicked dysplastic polyps. Both polyps were elevated after an injection of normal saline/methylene blue, and then an endoscopic mucosal resection (EMR) was successfully performed with no immediate complications (Figures 1, 2).



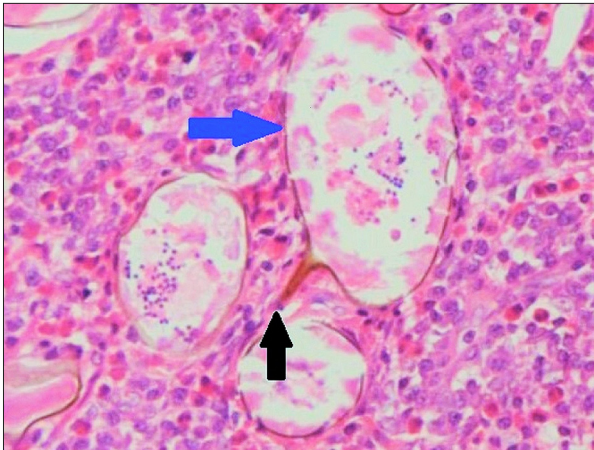
**Figure 1.** Endoscopic image shows large kidney shape rectal polypoid mass with wide base (indicated by the arrow).



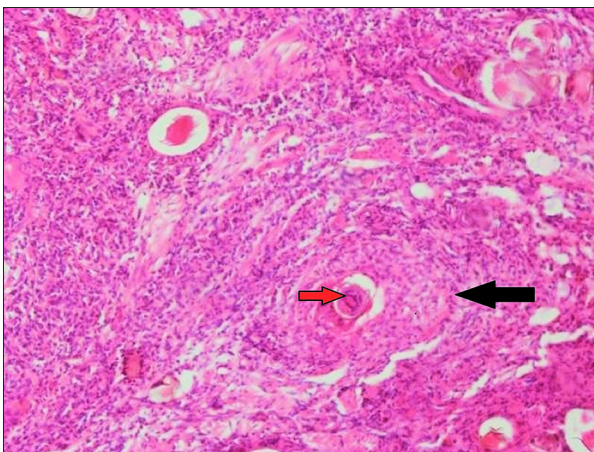
**Figure 2.** Endoscopic image showing the site of the polyp after endoscopic mucosal resection (EMR) with clear margins (black arrow) indicating complete resection. The blue color is the sub mucosa stained with methylene blue (red arrow).

## Histopathology

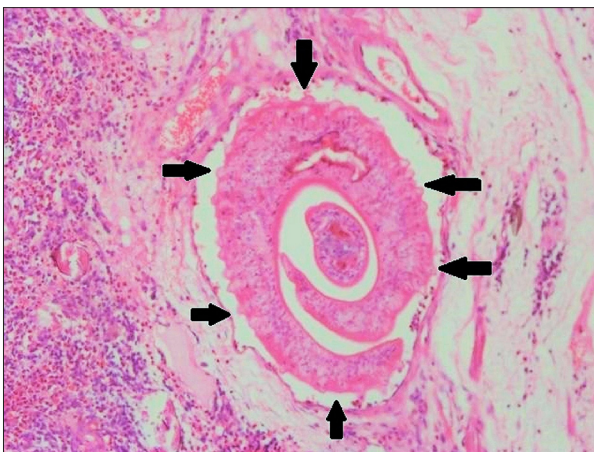
The histopathology results showed an infectious polyp containing oval shape *Schistosoma* eggs with long sharp lateral spine (Figure 3) surrounding by granuloma (Figure 4) indicate chronicity of the infection. In addition, *Schistosoma* worms were found inside the polyp tissue (Figure 5). The patient received anti-helminthic treatment (praziquantel 40 mg/kg for 3 days) on an out-patient basis after which he improved during follow-up in the out-patient clinic after 3 months when he was asymptomatic.



**Figure 3.** Histopathology image showing oval shape eggs (170–115×65–40 μm) (blue arrow) with a sharp lateral spine (black arrow) which indicate *Schistosoma mansoni* eggs.



**Figure 4.** Histopathology image showing *Schistosoma* eggs at the center (red arrow) surrounded by a granuloma (black arrow), which indicates a chronic infection.



**Figure 5.** Histopathology image showing elongate tubular snail shape *Schistosoma* worms (multiple arrows).

### Macroscopic

The macroscopic examination showed 2 polypoid soft tissue masses measuring 4×3×3 cm and 4×2×0.5 cm that were fixed in 10% formaldehyde. The cross-sectional surface was firm and whitish with an irregular white lining and superficial ulceration. The slide was stained with hematoxylin and eosin (H&E) and examined using an optical microscope.

### Microscopic

Microscopic sections revealed polypoid lesions lined by granulation tissue and partially by colonic epithelium. The stroma shows an eosinophil-rich granulomatous reaction surrounding many *Schistosoma* eggs (Figures 3, 4) and *Schistosoma* worms (Figure 5). No dysplasia or malignancy was seen.

### Discussion

The 2 major species of *Schistosomes* commonly produce gastrointestinal diseases: *S. mansoni* and *S. japonicum*. The infection is usually acquired in childhood in an endemic area, such as the Middle East [7]. The World Health Organization (WHO) estimated that at least 229 million people required preventive treatment in 2018. The prophylactic treatment should be repeated over several years to reduce morbidity [8]. We describe a case of 2 large wide-base rectal polyps with irregular surfaces that mimicked dysplastic polyps that were completely removed endoscopically via an EMR. A histopathological examination confirmed that it was a case of benign polyp caused by a *S. mansoni* infection in a 24-year-old Yemeni male, who was most probably infected when he was an adolescent in his home country, in which he used to swim in dams and rain water streams. Most of the patients with schistosomiasis have mild to moderate disease, and only 5% to 10% will be severely infected [9]. There are no specific symptoms of colonic schistosomiasis, and its symptoms mimic other gastrointestinal problems, such as diarrhea, abdominal distension, lower abdominal pain, bleeding from the rectum, and altered bowel habits [10]. Intestinal diseases, especially in the colon, are mostly caused by *S. mansoni* as the most commonly implicated pathogen. The most common histopathological findings from colonic biopsies of patients are *S. mansoni* ova in the colonic mucosa with no or mild inflammatory cell infiltrates that correlate with the endoscopic appearance in most patients [10–12]. Patients may present with non-specific symptoms, such as lower abdominal pain, occasional diarrhea, and rectal bleeding. A differential diagnosis may include a variety of colonic diseases, such as inflammatory bowel disease, infectious colitis, and colorectal malignancies. There is a correlation between symptom frequency and infection intensity, and the spectrum of colonic schistosomiasis varies from diffuse proctocolitis to

granulomatous disease or isolated polyposis [13,14]. As in our patient, all parts of the colon can be affected, but inferior mesenteric vein territory involvement in most of the cases indicates the infection most frequently involves the descending colon [13]. Intestinal *Schistosoma* rarely manifests as an intestinal obstruction caused either by intussusception of the ileocecal valve due to *Schistosoma* egg-induced fibrosis or a large polypoid mass causing luminal obstruction [14,15]. The studies concerning the pre-malignant risk potential of *Schistosoma* infection are limited and inconclusive with a limited causal relationship between colorectal cancer and *Schistosoma* infection for both *S. japonicum* and *S. mansoni* [16,17].

## Conclusions

It is very rare to encounter a *Schistosoma* infection that leads to formation of large colonic polyps manifested clinically as chronic abdominal pain and rectal bleeding in a young healthy

individual. Endoscopically, it is very difficult to differentiate this type of polyp from other colonic polyps; thus, a high index of clinical suspicion is required mainly in endemic areas that may prevent the physician from performing unnecessary interventions and avoid catastrophic complications that may occur. As demonstrated in this case report, large rectal polyps manifested as rectal bleeding and an unnecessary invasive intervention was performed for this patient who could be treated medically once he was appropriately diagnosed.

## Acknowledgement

Dr. Muhammad Farooque Awan for his assistance in writing of this manuscript.

## Conflict of interest

None.

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