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Clinicopathological Features of Giant Pseudotumoral Schistosomiasis: Report of Three Cases

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ABSTRACT

Introduction: *Schistosomiasis, also known as bilharzia, is a chronic tropical parasitic disease that remains highly endemic in many regions of the world, particularly in Madagascar. The most common clinical presentations involve the digestive, urogenital, and hepatosplenic systems. However, chronic schistosomal lesions may occasionally present as pseudotumoral masses mimicking malignant neoplasms, leading to major diagnostic challenges. This study aimed to report three cases of giant pseudotumoral schistosomiasis diagnosed by histopathological examination.*

Cases Presentation: *Three women originating from endemic regions of Madagascar were included in this study. The first patient, a 35-year-old woman from the Vatovavy region, presented with a large anal mass. Histopathological examination revealed schistosome eggs surrounded by eosinophil-rich granulomatous inflammation. The second patient, a 41-year-old woman from Haute Matsiatra, presented with chronic epigastric pain. Upper gastrointestinal endoscopy revealed a large budding gastric lesion, and histological analysis confirmed a schistosomal pseudotumor. The third patient, a 35-year-old woman also originating from Haute Matsiatra, presented with an intraperitoneal mass associated with bowel obstruction syndrome. Histopathological examination demonstrated partially calcified schistosome eggs embedded within fibro-myxoid tissue.*

Conclusion: *Giant pseudotumoral schistosomiasis represents a rare but clinically important manifestation of chronic schistosomal infection. It may closely mimic malignant tumors, particularly when presenting as digestive, anal, or abdominal masses. In endemic regions, schistosomiasis should therefore be considered in the differential diagnosis of tumor-like lesions. Histopathological examination remains the cornerstone of diagnosis, allowing identification of parasitic eggs, characterization of granulomatous inflammation, and exclusion of associated malignancy.*

Keywords

Schistosomiasis, Pseudotumor, Histopathology, Granuloma, Madagascar.

Introduction

Schistosomiasis is an acute and chronic parasitic disease caused by blood flukes belonging to the genus *Schistosoma*. Human infection occurs following skin contact with freshwater contaminated by cercariae released from infected intermediate host snails. After penetrating the skin, the larvae migrate through the bloodstream and mature into adult worms within the vascular system. Female worms subsequently lay eggs, some of which are excreted through stool or urine, whereas others become trapped within host tissues, where they induce granulomatous inflammatory reactions responsible for chronic lesions [1-5].

In Madagascar, schistosomiasis remains endemic and continues to represent a major public health concern. Recent epidemiological studies have highlighted the persistence of both intestinal and urogenital forms of the disease, with geographical variations

depending on parasite species and ecological conditions. *Schistosoma mansoni* is predominantly distributed throughout the eastern, central, and southern regions of the country, whereas *Schistosoma haematobium* is mainly encountered in western and northern areas, with several regions exhibiting co-endemicity [6-8].

This present study aimed to describe the clinical, epidemiological, and histopathological features of three cases of giant pseudotumoral schistosomiasis and to emphasize the essential role of histopathological examination in establishing the diagnosis.

Case Presentation 1

The first case involved a 35-year-old woman originating from the Vatovavy region of Madagascar. She presented with a large anal mass measuring approximately 21 cm in its greatest dimension and evolving over a one-year period, raising suspicion of an anal neoplasm (Figure 1).

Histopathological examination revealed numerous schistosome eggs surrounded by eosinophil-rich inflammatory granulomas, consistent with pseudotumoral schistosomiasis (Figure 2).

Figure 1: Clinical appearance of the giant anal pseudotumoral lesion mimicking an anal tumor.
Source: Department of Visceral Surgery, Tambohobe University Hospital Center, Fianarantsoa.

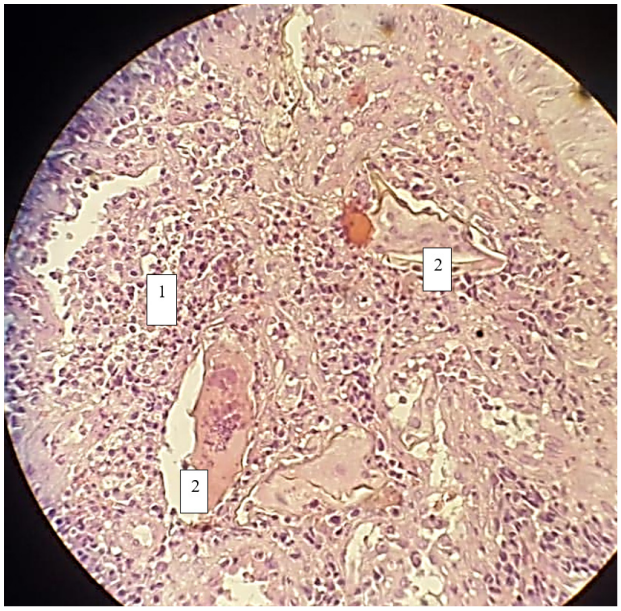

Figure 2: Histopathological examination of the anal lesion showing eosinophil-rich inflammatory granulomas (1) surrounding schistosome eggs (2), (Hematoxylin and eosin staining ×400).
Source: Department of Pathology and Cytology, University Hospital Andrainjato, Fianarantsoa, Madagascar.

Case Presentation 2

The second case concerned a 41-year-old woman from the Haute Matsiatra region who presented with chronic epigastric pain. Upper gastrointestinal endoscopy revealed a large budding antral gastric mass suggestive of a malignant gastric tumor.

Microscopic examination demonstrated granulomatous inflammatory infiltrates rich in eosinophils and multinucleated giant cells associated with schistosome eggs, leading to the diagnosis of gastric pseudotumoral schistosomiasis.

Case Presentation 3

The third case involved a 35-year-old woman, also originating from Haute Matsiatra, who presented with an intraperitoneal mass associated with bowel obstruction syndrome. Surgical resection of the omental mass was performed (Figure 3).

Histopathological examination of the surgical specimen revealed schistosome eggs, some of which were calcified, embedded within fibro-myxoid tissue areas, consistent with chronic pseudotumoral schistosomiasis (Figure 4).

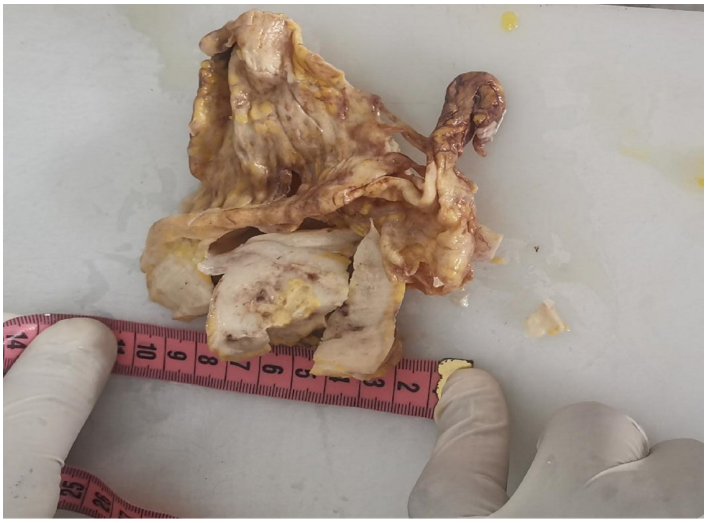

Figure 3: Macroscopic appearance of the omental mass.
Source: Department of Pathology and Cytology, University Hospital Andrainjato, Fianarantsoa, Madagascar.

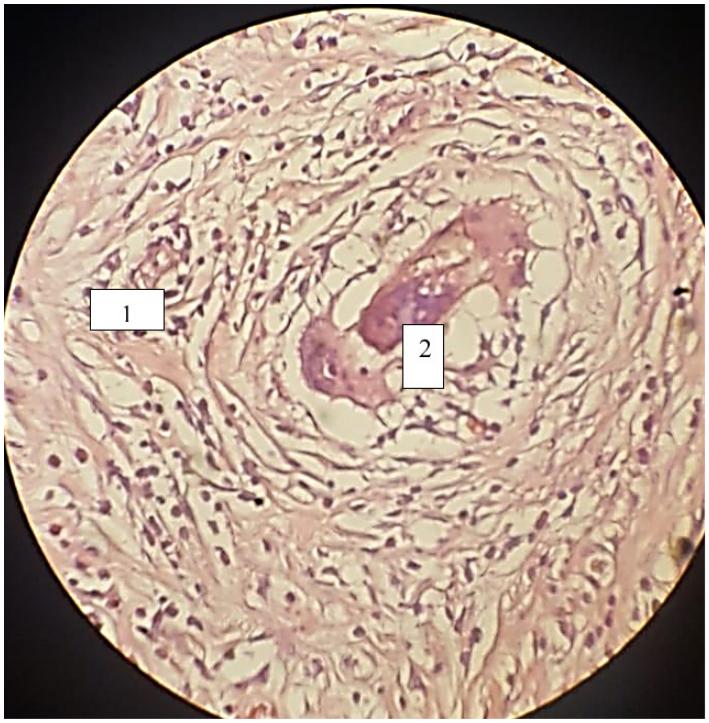

Figure 4: Histopathological appearance of the omental lesion showing eosinophil-rich granulomatous inflammation (1) surrounding schistosome eggs (2) Hematoxylin and eosin staining, ×100.
Source: Department of Pathology and Cytology, University Hospital Andrainjato, Fianarantsoa, Madagascar.

Table 1: Summary of the three cases.

Age (years)	Sex	Region of Origin	Clinical Presentation	Histopathological Findings
35	Female	Vatovavy	Large anal mass	Schistosome eggs associated with eosinophil-rich granulomatous inflammation
41	Female	Haute Matsiatra	Budding gastric tumor	Schistosome eggs surrounded by eosinophil-rich granulomas
35	Female	Haute Matsiatra	Intraperitoneal mass	Partially calcified schistosome eggs within fibro-myxoid tissue

Discussion

Schistosomiasis remains one of the most important communicable diseases with major health and socioeconomic consequences in developing countries. According to the World Health Organization, approximately 250 million people worldwide are affected, predominantly in low-resource tropical and subtropical regions [1].

The species most commonly involved in human pathology are *Schistosoma haematobium*, *Schistosoma mansoni*, and *Schistosoma japonicum*. Intestinal involvement is mainly associated with *S. mansoni* and *S. japonicum*, whereas urogenital disease is predominantly related to *S. haematobium*. Chronic clinical manifestations mainly reflect the localization of parasite eggs and the intensity of the host inflammatory response, leading to abdominal pain, diarrhea, rectal bleeding, inflammatory polyposis, periportal fibrosis, hematuria, and bladder or genital lesions [2-4].

The originality of the present series lies in the tumoral appearance of the lesions. All three patients presented with mass-like lesions, including an anal mass, a budding gastric mass, and an intraperitoneal mass. In each case, a neoplastic process was initially suspected clinically.

Several cases of schistosomal pseudotumoral lesions mimicking neoplasms have previously been reported in the literature, including retroperitoneal masses, rectal and colonic polyps, giant colonic granulomas, and abdominal pseudotumors [9-16]. Although uncommon, this presentation is clinically important because it may lead to extensive investigations, unnecessary surgery, or an initial diagnosis of malignancy.

The geographical context is an essential diagnostic clue. All three patients originated from Madagascar regions where schistosomiasis remains endemic. Recent epidemiological data from Madagascar continue to demonstrate the persistence of both intestinal and urogenital forms despite several decades of control programs [7].
The fundamental lesion in chronic schistosomiasis results from tissue deposition of parasite eggs. Although adult worms reside within blood vessels, the eggs trapped in tissues induce the most significant pathological changes [3,5]. Around these eggs develops a granulomatous inflammatory reaction composed of epithelioid cells, macrophages, lymphocytes, multinucleated giant cells, plasma cells, and numerous eosinophils. While this response aims to contain parasitic antigens, it also promotes tissue destruction, fibrosis, mucosal hyperplasia, and occasionally pseudotumoral mass formation [3,5,6].

In pseudotumoral forms, the granulomatous reaction becomes sufficiently extensive to produce clinically detectable masses. Lesion size likely depends on several factors, including parasite burden, duration of infection, repeated exposure, host immune response, and tissue localization of eggs. The presence of calcified eggs, as observed in our third case, strongly supports chronic disease evolution.

The diagnosis of pseudotumoral schistosomiasis is particularly challenging because clinical manifestations are nonspecific. Chronic epigastric pain, anal swelling, or abdominal masses cannot reliably distinguish parasitic pseudotumors from malignant neoplasms. Conventional parasitological examinations may lack sensitivity in chronic or localized forms, especially in pauciparasitic infections. Stool and urine examinations may therefore be negative despite active tissue disease [2,3,6].

Endoscopy and imaging studies are essential for lesion localization, evaluation of extension, detection of complications, and guidance of biopsies. However, radiological and endoscopic findings remain nonspecific because budding masses, polypoid lesions, and wall thickening may strongly mimic cancer [9,13,15].

Histopathological examination remains the cornerstone of diagnosis. It allows direct identification of schistosome eggs within tissue lesions, characterization of the granulomatous inflammatory reaction, and exclusion of associated malignancy. In all three cases reported here, the final diagnosis was established through histological demonstration of parasite eggs associated with granulomatous inflammation.

The first case illustrates the classical eosinophil-rich granulomatous reaction surrounding schistosome eggs. The second case demonstrates that gastric involvement may mimic a budding gastric tumor, whereas the third case highlights the chronic fibro-inflammatory evolution associated with calcified eggs embedded in fibro-myxoid tissue.
The differential diagnosis mainly depends on the anatomical location of the lesion. In cases of anal masses, the main differential diagnoses include squamous cell carcinoma, giant condyloma, chronic inflammatory lesions, granulomatous infectious diseases, and inflammatory polyps. Previous reports of anal polyps caused by *Schistosoma mansoni* demonstrate that schistosomal lesions may involve the anal region and mimic neoplastic processes [10].

For budding gastric lesions, the differential diagnosis includes gastric adenocarcinoma, lymphoma, gastrointestinal stromal tumors (GIST), hyperplastic polyps, inflammatory lesions, and infectious granulomatous diseases.

Similarly, intraperitoneal or retroperitoneal masses may suggest mesenchymal tumors, lymphomas, metastatic disease, peritoneal carcinomatosis, neuroendocrine tumors, or chronic granulomatous infections. Previously reported cases of retroperitoneal schistosomal pseudotumors highlight the diagnostic difficulty of these deep-seated lesions in the absence of histological examination [9].

This case series presents three major points of interest. First, it illustrates the diversity of anatomical locations involved, including anal, gastric, and intraperitoneal sites. Second, all patients originated from Malagasy endemic regions where schistosomiasis remains highly prevalent. Third, the tumoral appearance of the lesions was sufficiently suggestive of malignancy to complicate the initial clinical diagnosis.

Conclusion

Giant pseudotumoral schistosomiasis is a rare but clinically significant manifestation of chronic schistosomal infection. Its clinical, radiological, and endoscopic presentation may closely mimic malignant neoplasms, leading to important diagnostic challenges. The three observations reported in this study namely a giant anal mass, a budding gastric lesion, and an intraperitoneal mass illustrate both the diversity of possible localizations and the misleading tumoral appearance of this entity.

Histopathological examination remains the cornerstone of diagnosis. It enables identification of schistosome eggs, characterization of the associated granulomatous inflammatory response, and exclusion of concomitant malignancy. In endemic settings such as Madagascar, schistosomiasis should systematically be considered in the differential diagnosis of digestive, anal, and abdominal tumor-like lesions.

References

1. World Health Organization. Schistosomiasis [Internet]. Geneva: World Health Organization. 2026.
2. Centers for Disease Control and Prevention. DPDx - Schistosomiasis Infection [Internet]. Atlanta: CDC. 2026.
3. Centers for Disease Control and Prevention. Schistosomiasis. In: CDC Yellow Book 2026: Health Information for International Travel [Internet]. Atlanta: CDC. 2025.
4. Colley DG, Bustinduy AL, Secor WE, et al. Human schistosomiasis. Lancet. 2014; 383: 2253-2264.
5. McManus DP, Dunne DW, Sacko M, et al. Schistosomiasis. Nat Rev Dis Primers. 2018; 4: 13.
6. Gray DJ, Ross AG, Li YS, et al. Diagnosis and management of schistosomiasis. BMJ. 2011; 342: d2651.
7. Ramarokoto CE, Randrianasolo BS. Epidemiology of schistosomiasis in Madagascar after thirty years of control program (1994-2024). Tunis Med. 2025; 103: 711-719.
8. Wilczyńska W, Kasprowicz D, Świetlik D, et al. The prevalence of Schistosoma haematobium and its impact on the hematological profile of children living in Northern Madagascar. Pathogens. 2025; 14: 172.
9. Marín-Martínez L, Kyriakos G, Sánchez-Gutiérrez D. Pseudotumoral form of schistosomiasis mimicking neuroendocrine tumor: a case report and brief review of the differential diagnosis of retroperitoneal masses. Pan Afr Med J. 2020; 37: 186.
10. Raso P, Sander EM, Raso LAM, et al. Anal polyp caused by Schistosoma mansoni. Rev Soc Bras Med Trop. 2013; 46: 252-254.
11. Jamal M, Rayes O, Samuel L, et al. The brief case: benign rectal polyp with Schistosoma mansoni. J Clin Microbiol. 2017; 55: 992-995.
12. Koulali H, Zazour A, Khannoussi W, et al. Colonic schistosomiasis: a case report. World J Gastrointest Endosc. 2022; 14: 789-794.
13. Mulate ST, Nur AM, Tasamma AT, et al. Colonic schistosomiasis mimicking cancer, polyp, and inflammatory bowel disease: five case reports and review of literature. World J Gastrointest Endosc. 2024; 16: 472-482.
14. Orare K, Mohamed A, Thakkar M, et al. Colonic polyps: a rare clinical manifestation of schistosomiasis: a case report. Pan Afr Med J. 2022; 42: 187.
15. Alyhari Q, Ahmed F, Al Shaibani H, et al. Huge colonic granuloma of schistosomiasis mimicked cancer in a 10-years-old child: a case report. Int Med Case Rep J. 2022; 15: 379-384.
16. Elhoseeny MM, Sallam A, Eladl AE, et al. Bleeding rectal polyp as an atypical presentation of intestinal schistosomiasis: a case report from Egypt. PLoS Negl Trop Dis. 2026; 20: e0013972.