

CASE REPORTS

**CERVICAL SCHISTOSOMIASIS MASQUERADING AS INVASIVE
CARCINOMA: A CASE REPORT**

Cervical Schistosomiasis Masquerading as Invasive Carcinoma: A Case Report

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Journal Name	BMC Infections Disease
Publisher	BioMed Central
Impact Factor	3.1

Abstract

Introduction

Cervical schistosomiasis, a rare manifestation in women, can closely resemble invasive carcinoma, posing significant diagnostic challenges. This case highlights the complexities involved in the diagnosis and management of schistosomiasis of the cervix.

Case presentation

A 48-year-old premenopausal woman from Ethiopia visited the gynaecologic outpatient department for routine cervical cancer screening. Physical examination revealed a 2cmx3cm irregular and fragile cervix. Colposcopy showed a type-II transformation zone with significant aceto-white lesions. Initial clinical findings suggested invasive carcinoma, but a punch biopsy revealed a high-grade squamous intraepithelial lesion (HSIL) without basement membrane invasion. Subsequent cold knife conization result showed concomitant cervical schistosomiasis. The patient was treated with praziquantel but did not return for follow-up.

Discussion and conclusion

This case underscores the importance of considering cervical schistosomiasis in the differential diagnoses for cervical abnormalities, particularly in endemic areas. Given its nonspecific symptoms, which often resemble an invasive carcinoma, a high index of suspicion, thorough history, and physical examination are crucial for diagnosis and treatment of cervical schistosomiasis. As this is a rare manifestation in women, this case adds to the limited literature available on the condition. As this case is likely to be the first of its kind reported in Ethiopia, it underscores the call for greater awareness among health professionals to facilitate appropriate management and ultimately improve patient outcomes.

Keywords: Case report, Cervical schistosomiasis, Cold knife conization, High-grade squamous intraepithelial lesion, Invasive cervical carcinoma

Introduction

Cervical schistosomiasis, a rare manifestation in women, can closely resemble invasive carcinoma, posing significant diagnostic challenges. This case highlights the complexities involved in the diagnosis and management of schistosomiasis of the cervix.

Case Presentation

A 48-year-old premenopausal Ethiopian woman attended the gynaecologic outpatient department for routine cervical cancer screening. She had two vaginal deliveries and an unremarkable gynaecologic history. She was asymptomatic at presentation. Vital signs were normal, weight 60 kg, and abdominal and systemic examinations were unremarkable. She reported frequent barefoot walking through rice fields during the rainy season [1].

Pelvic examination revealed a 2×3 cm irregular, fragile cervix. The uterus was

normal in size, retroverted, and the parametrium appeared free of tumour. Urinalysis and stool microscopy were unremarkable. Tests for HPV and HIV were negative. Colposcopy showed a type II transformation zone with circumferential dense aceto-white lesions, notably prominent at 6 o'clock, with irregular corkscrew vascular patterns. Clinical suspicion was for invasive cervical carcinoma, prompting colposcopy-directed punch biopsy. Histopathology revealed a high-grade squamous intraepithelial lesion (HSIL/CIN-III) without basement membrane invasion (Fig. 1) [2].

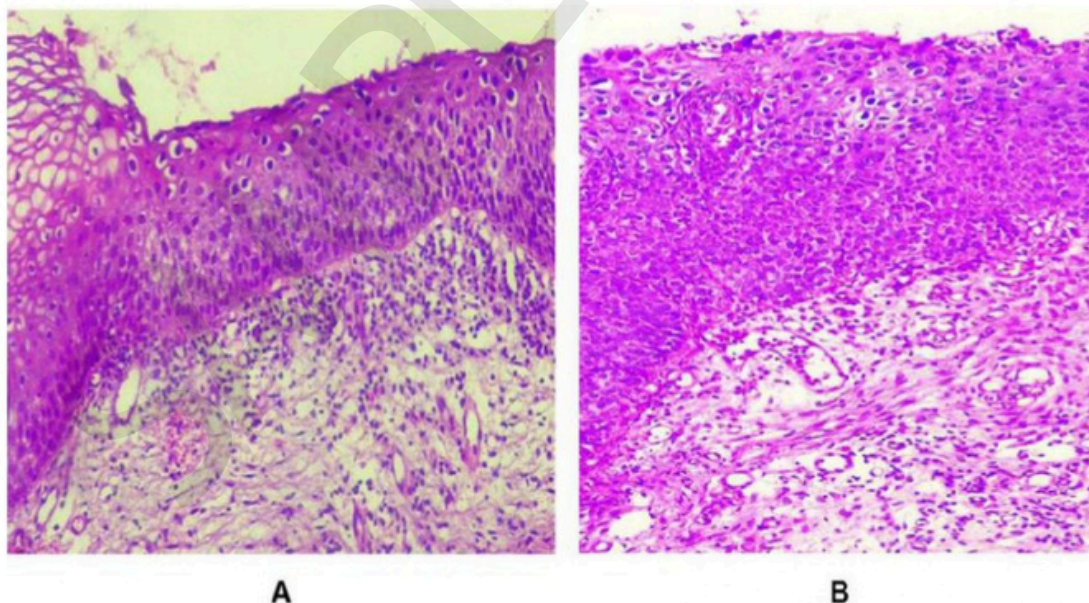


Figure 1: Low power (A) and medium power (B) light microscopy of cervical punch biopsy showing features of high-grade intraepithelial lesion (HSIL). Koilocytosis and dysplastic surface epithelium were seen, with the dysplasia involving more than half of the epithelial thickness in some areas (B), but without basement membrane invasion (H & E stain)

Due to discordance between clinical suspicion and biopsy results, cold knife conization (CKC) was performed. The CKC specimen measured 28×27×20 mm, with irregular, firm ectocervical tissue and multiple ulcerative Gray-brown lesions. Histopathology revealed partly eroded ectocervical mucosa with numerous calcified *Schistosoma* eggs in subepithelial stroma, dense eosinophilic infiltrates, and areas of moderate dysplasia limited to the lower epithelial half. No basement membrane invasion was noted, and margins were negative. Final diagnosis: HSIL with

Discussion

Schistosomiasis is caused by trematodes of the genus *Schistosoma*, with *S. haematobium* primarily affecting the urinary tract, *S. mansoni* the large intestine and rectum, and *S. japonicum* the small intestine [6]. Infection occurs via skin penetration by cercariae released from freshwater snails. Adult worms migrate to organ-specific venous plexuses; *S. haematobium*'s venous connections to pelvic organs explain its association with cervical schistosomiasis.

Egg deposition in cervical venules triggers inflammatory and hyperplastic epithelial changes, mimicking neoplasia [7]. Fibrosis may obstruct cervical glands, leading to dilatation and epithelial hyperplasia resembling leukoplakia. Clinically, schistosomal lesions can present as diffuse infiltration (swollen, firm, granular, sometimes ulcerated cervix) or papillomata (polypoid swellings with ulcerated, congested surfaces)

concomitant cervical schistosomiasis (Fig. 2) [3].

Histologic differentiation of HSIL from reactive atypia was based on classic dysplastic features on H&E stains; immunohistochemistry (p16, Ki-67) was not available [4]. Treatment with praziquantel (40 mg/kg in two divided doses) was given on the 17th postoperative day. The patient did not attend scheduled follow-up visits. This case is likely the first report of cervical schistosomiasis from Ethiopia [5].

[8]. Chronic infection is often asymptomatic, as in this patient. Symptoms can include dysmenorrhea, menorrhagia, leukorrhea, lower abdominal pain, post-coital bleeding, dyspareunia, and intermenstrual bleeding. Lesions may appear cancerous, occasionally prompting unnecessary surgery.

Diagnosis relies on a thorough history, including exposure in endemic areas, and microscopic detection of *Schistosoma* eggs in cervical biopsies or tissue sections. Initial biopsy may miss eggs due to sampling error [5]. Treatment involves praziquantel (40 mg/kg), which eradicates adult worms [1]. Surgical intervention may be required in chronic cases with significant fibrosis or structural changes.

Cervical schistosomiasis may mimic carcinoma clinically, as observed in this case. While *S. haematobium* is linked to bladder carcinoma, the association with cervical

carcinoma is rare. Schistosomal egg deposition can induce precancerous epithelial changes, but co-occurrence with HPV is more likely in cervical neoplasia. Some studies report that cervical schistosomiasis may increase susceptibility to STIs, including HIV, and cause infertility via ovarian or tubal fibrosis. In this patient, HSIL and schistosomiasis coexisted, highlighting the diagnostic challenge

This case emphasizes the importance of considering cervical schistosomiasis in the differential diagnosis of suspicious cervical lesions, particularly in endemic regions. Histopathological confirmation is critical to avoid misdiagnosis of invasive carcinoma. Early treatment with praziquantel can effectively eliminate infection and prevent complications. Gynaecologists in endemic areas should maintain a high index of suspicion for schistosomiasis in atypical cervical lesions [9].

Conclusion

Cervical schistosomiasis is a rare condition that can mimic invasive carcinoma, complicating diagnosis. This case demonstrates the importance of thorough evaluation, histopathological confirmation, and timely praziquantel treatment. Awareness of this entity is essential, particularly in endemic regions like Ethiopia, to prevent misdiagnosis and ensure appropriate management. Further research is needed to improve screening, diagnosis, and treatment protocols for cervical schistosomiasis [1,9].

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