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CASE REPORT

Cutaneous Schistosomiasis

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Abstract:

Cutaneous schistosomiasis is extremely rare even in endemic regions. I report a case of a 9-year-old girl had infected by schistosoma and presented late with vulval warty partly ulcerated nodule, the diagnosis was made on the basis of a routine skin biopsy by identification of schistosoma haematobium eggs deposited in the skin tissue and surrounded by inflammatory infiltrate with mild dysplastic change of epidermis. Dermatologists should be aware of this presentation of schistosomiasis when evaluating patients with unusual skin lesions.

1. Introduction

Schistosomiasis is a parasitic disease caused by several species of trematodes flatworms of the genus schistosoma. It is often endemic throughout wide area of the tropics and subtropics and produce chronic illness that can damage internal organs and, in children, impair growth and cognitive development. After malaria, schistosomiasis is the second most common health disease in Yemen (1). The cutaneous manifestations of schistosomiasis result from (a) penetration of the skin by the infective stage cercariae resulting in schistosomal dermatitis; (b) urticaria, oedema, fever, and pruritus which are hypersensitivity manifestations of invasion; and (c) ectopic deposition of ova in the skin tissue by adult worms which have passed in to the superficial veins and considered as very rare usually even in endemic regions (2).

2. Case Presentation

A 9-year-old girl presented with a 6 months history of burning micturation with persistent vulval ulcer without response to topical dermatological therapy. Physical examination disclosed a painless, warty partly ulcerated nodule on the left labia major (Figure 1). Microscopic urine and stool analysis were negative for schistosomal eggs. A punch biopsy specimen was obtained from the lesion and sent to the histopathologist where it was processed as for routine paraffin embedding. Sections were cut and stained by Hematoxylin and Eosin. Histological diagnosis of cutaneous schistosomiasis was made. Sections revealed a deposition of viable schistosomal eggs with terminal spine in the epidermis and dermis surrounded by inflammatory cells infiltrate mostly eosinophils. The epidermis shows acanthosis with mild dysplastic change (early intraepithelial neoplasia) in form of mild and hyperchromatic and pleomorphic nuclei of the lower third of epidermal thickness (Figure 2).

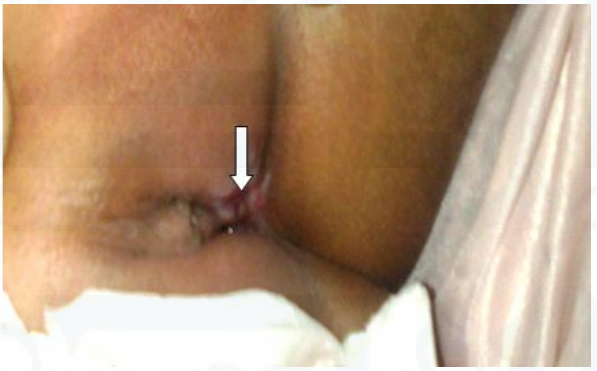

Figure 1. Perigenital warty partly ulcerated nodule on the left labia major (arrow)

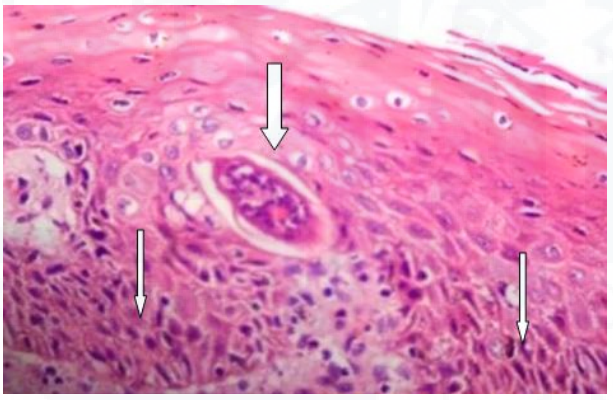

Figure 2. Histopathology of skin revealing deposition of a viable schistosoma egg with terminal spine (thick arrow). Note the epidermal acanthosis and lower third hyperchromatic and pleomorphic nuclei (thin arrows). (Hematoxylin and eosin stain x 400)

3. Discussion

Cutaneous schistosomiasis is extremely rare, even in endemic regions. It is usually leads to non-specific papulonodular lesions in the perigenital area (3). Whereas symptoms and signs of urinary and gastrointestinal forms of the infection are recognized readily, cutaneous manifestations produced by adult and eggs deposition are still a challenging of diagnosis (4). Cutaneous schistosomal manifestations occur with all three

subspecies of schistosoma. Skin involvement may occur at the site of penetration of the schistosomal cercariae released by snails in fresh water lakes and presents as an itching papular eruption occurring 1-2 h after exposure, lasting a maximum of one week and resolving spontaneously. An urticaria reaction can occur 4-8 weeks after exposure with an immune-complex mediated illness manifest as fever, purpura, arthralgia and abdominal pain, resolving spontaneously within 4-6 weeks. The cercariae pass via the lungs and liver into the portal venous system and adult flukes lodge in the venous plexuses. Direct retrograde spread of the adult flukes from their usual sites into the venous system supplying vulval skin leads to deposition of ova in the skin and subsequent formation of genital granulomas, as in our patient. The skin lesions are most frequently found in the perigenital area of female patients. Extragenital skin lesions are seen less frequently (5). The diagnosis of ectopic schistosomiasis cannot be depending on the bases of standard urine analysis. Hence the diagnosis is based on the demonstration of schistosoma hematobium eggs in examined tissue (6). The lesion responds to conventional therapy and resolve within 5 months (7). In the presenting case, the epidermis shows mild dysplasia (early vulval intraepithelial neoplasia), unusual association between vulval schistosomiasis, microinvasive squamous cell carcinoma of vulva and high-grade vulval intra-epithelial neoplasia in a human immunodeficiency virus-positive patient was reported previously (8). Cervical schistosomiasis seems to be a possible risk factor for the development of cervical intraepithelial neoplasm and cancer (9). Schistosoma haematobium alone is not the causative agent for the abnormal proliferation of squamous epithelium of the cervix as well as vulva; it acts as a cofactor by traumatizing the genital epithelium or immune suppression to favour human papilloma virus infection (10). However, early mild change in the epidermis of our patient may be due to short duration of disease and early diagnosis. Dermatologists should be aware of this presentation of schistosomiasis when evaluating patients with unusual skin lesions.

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