CASE REPORT

Woody Vulva: An Unusual Presentation of Vulvar Tuberculosis

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Introduction

Tuberculosis of the genital tract is quite common in India. Most women with genital tuberculosis remain asymptomatic and are diagnosed for the first time during evaluation of infertility. Fallopian tubes and peritoneal surfaces are most commonly affected as seen at laparoscopy for infertility evaluation. Endometrial cavity is also frequently involved, but involvement of the cervix, vagina, and vulva is very rare. Primary vulvar tuberculosis is seen in only 2 % of cases of pelvic tuberculosis and often requires surgical intervention for cosmetic results.

Vulvar tuberculosis presents in varied forms and the diagnosis remains elusive for long. We report a case of primary vulvar tuberculosis with a woody appearance at presentation that responded almost completely to medical treatment and did not require any surgical intervention.

Case Report

A 55-year-old postmenopausal woman presented with thickening and dark pigmentation of the vulvar skin, associated with diffuse swelling of the vulva. The patient also had a pruritic rash over the vulva and both groins. Swelling over the vulva and the accompanying skin changes had occurred gradually over 3–4 years, whereas the pruritic rash occurred off and on during this period. She was unable to have intercourse due to narrowing of introitus by the hard lesion. There were no associated bowel or bladder symptoms, no distension of abdomen, or groin lumps. She had been treated with topical and systemic antifungals and topical steroids on 6–7 occasions, providing relief in pruritus, but without relief in her vulvar swelling and skin changes. The grotesque appearance of the vulva depressed her. On examination, she was found to have markedly thickened vulvar skin involving mons pubis, both labia minora and majora with loss of skin creases (Fig. 1). There were some nodular thickenings scattered over the vulvar lesion and a very firm, almost woody, subcutaneous edema. In addition, there were superficial changes suggestive of candidal infection of the vulvar and groin areas. Inguinal lymph nodes were not enlarged. In view of the gradually progressive vulvar changes, a granulomatous inflammation such as vulvar tuberculosis was considered as the possible cause. Her husband was examined for any clinical evidence of tubercular epididymitis, but was found to be normal. Chest skiagram was normal and the Mantoux test not contributory. ESR was 18 mm in 1st hour. HIV test was

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negative. A differential diagnosis of other chronic hypertrophic lesions such as lichen simplex chronicus and vulvar elephantiasis was also considered. Biopsy was obtained from one of the cutaneous nodules to confirm the diagnosis. Histopathology of the biopsy specimen showed features of lichen scrofulosorum (Figs. 2, 3). Acid-fast bacilli could not be stained in the biopsy specimen or isolated in urine, sputum, or blood cultures. In view of the convincing histopathologic picture, she was started on antitubercular therapy with rifampicin, isoniazid, pyrazinamide, and ethambutol. In addition, topical antifungals for the superficial candidiasis were also instituted. The four drugs were continued for 2 months and the first two, rifampicin and isoniazid, for the next 7 months. She showed gradual improvement in her vulvar lesion and, at the end of her antitubercular therapy, vulvar texture and appearance had returned to near normal (Fig. 4). She could resume coital function at the end of 8 months of therapy. No surgical intervention was required for her vulvar lesion.

Discussion

Tuberculosis has afflicted mankind since time immemorial [1]. Female genital tuberculosis is relatively common in India and other Asian countries [2]. The disease is usually asymptomatic, detected incidentally during the work-up for infertility. Symptomatic genital tract tuberculosis is uncommon and presents with lump abdomen, menstrual irregularities, abdominal pain, and various constitutional symptoms [3].

Genital tuberculosis affecting the fallopian tubes and the uterus mostly results from a hematogenous spread from a primary focus in the chest [4]. Involvement of the cervix, vagina, and vulva may also occur hematogenously or by

Fig. 1 Woody vulva at initial presentation

Fig. 2 Photomicrograph showing granuloma with giant cells HE $\times 100$

Fig. 3 Photomicrograph showing giant cell in a granuloma HE $\times 400$

Fig. 4 Near normal vulva after completion of antitubercular therapy

direct extension from an infected focus in the endometrial cavity. Primary genital tuberculosis from venereal transmission from a partner with tubercular epididymitis has

been suggested, which presents as isolated chronic ulcerative lesions of the external genitalia in the absence of TB of the upper urogenital system [2, 5].

Tuberculosis of the vulva and vagina is extremely rare, affecting only 2 % of all pelvic tuberculosis [2]. The gross appearance of vulvar tuberculosis is varied, ranging from ulcerative lesions, discharging sinuses, elephantiasis and esthiomene, lymphedema, or grossly hypertrophic lesions [6–9]. No age is immune from this rare disease. The youngest patient reported in the literature was 2 years old and the oldest was 76 years old [10, 11]. The hypertrophic hyperpigmented appearance of vulvar tuberculosis with a woody texture, as in our case, was indeed unusual, which led to enormous delay in her diagnosis. A strong clinical suspicion followed by vulvar biopsy and histopathology can prevent delay in the diagnosis of vulvar tuberculosis. Microscopically, vulvar tuberculosis shows caseating granulomas. These are, however, only suggestive of tuberculosis, but not diagnostic. Staining for acid-fast bacilli was not found to be very useful in making the diagnosis [12]. Isolation of the mycobacterium is the gold standard for diagnosis, but a third of cases are culture negative. Therefore, the presence of typical granulomata may be sufficient for diagnosis and the response to therapy with antitubercular drugs confirms the diagnosis, as in our case.

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