

Research Letter

Vulvar tuberculosis

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Tuberculosis (TB) affects reproductive age women in developing countries and more than half of cases worldwide occur in the Asia-Pacific region [1]. TB is a very old disease in human history, and an increase in the number of cases may be because of the prevalence of human immunodeficiency virus infections. Vulvar mycobacterial TB is a rare disease and usually occurs secondary to spread from a primary lung lesion. Other genital organs including the fallopian tubes, uterus, and ovary can be affected, and pelvic TB is associated with decreased fertility.

Autoinoculation by hematogenous or direct spread is the most common method of transmission to the pelvic organs from a primary infection in the chest [2–6]. TB infection of the vulva and vagina is rare and is seen in less than 2% of cases with pelvic TB. We herein present a case of vulvar TB.

A 74-year-old menopausal Taiwanese woman, para 6, was referred to our hospital for suspected vulvar malignancy. The patient had a history of vulvar itching and an ulcerative lesion without local tenderness over the right labia majora for several months. She denied any history of chronic cough, loss of appetite, weight loss, or low-grade fever. Her medical history was significant for diabetes mellitus (DM) controlled with oral medications and hypertension. She denied any history of surgery, multiple sex partners, or family history of TB.

On physical examination, the patient was found to have an ulceration of approximately 0.8 × 0.4 cm involving the right upper labia majora (Fig. 1). On speculum examination, the vaginal walls were smooth and the cervix was normal in appearance. There was no abnormal vaginal discharge. Bimanual examination revealed the uterus was anteverted,

small, and no pelvic mass or inguinal lymphadenopathy was detected. A Pap smear was performed, which later showed reactive changes. Ultrasonography revealed that the uterus was small and there were no pelvic masses or cysts.

Under a clinical diagnosis of vulvar malignancy, excisional biopsy of the ulcerative lesion was performed without any complications or significant bleeding. The excised lesion was 0.8 × 0.4 × 0.3 cm. Histopathological examination revealed necrotizing granulomata (Fig. 2). Staining for acid-fast bacilli revealed the presence of mycobacterium TB (Fig. 3). No evidence of malignancy was found. Rapid plasma reagin was negative, and the level of squamous cell carcinoma antigen was 0.4 ng/dL. The complete blood count was within normal limits. The patient was referred to the chest outpatient department for further workup.

Chest radiograph revealed mild peribronchial infiltration without pleural effusion. Acid-fast stain of sputum revealed acid-fast bacilli and culture was positive for mycobacterium TB. The patient was initially treated with a four-drug regimen, i.e. rifampin (450 mg everyday), isoniazid (300 mg everyday), ethambutol (800 mg everyday), and pyrazinamide (1,000 mg everyday) for 2 months. After 2 months of treatment, acid-fast stain of the sputum was negative for acid-fast bacilli and culture was negative for mycobacterium TB. No new lesions were noted in the vulvar area. Then she received antituberculosis treatment with two drugs, rifampin (450 mg everyday) and isoniazid (300 mg everyday), for 4 months. The total antituberculosis treatment course was 6 months. The last outpatient department follow-up was 6 months later after initial excision and there was no evidence of recurrence.

In this case, there were no typical symptoms or signs of TB infection, such as chronic cough, loss of appetite, weight loss, postmenopausal bleeding, pelvic pain, or low-grade fever. The only symptoms this patient had were vulvar itching and an ulceration, which suggested malignancy and prompted a biopsy for diagnosis. Vulvar TB is frequently asymptomatic.

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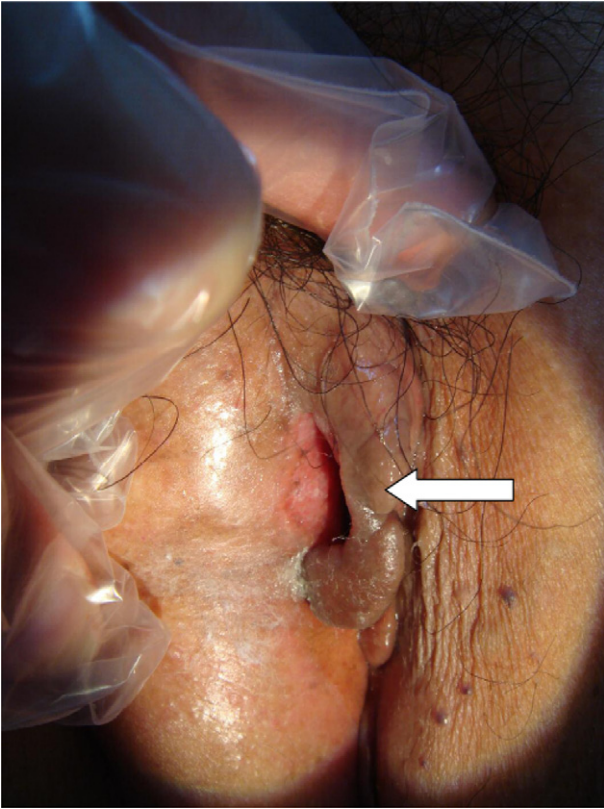


Fig. 1. The ulcerated lesion located between the right labia minora and majora. This picture was taken after the excisional biopsy was performed.

Symptomatic genital TB usually presents with infertility (45–55%), pelvic pain (50%), poor general health (25%), and menstrual disturbances (20%) [4]. Autoinoculation by hematogenous or direct spread is the most common method of transmission to the pelvic organs from a primary infection in

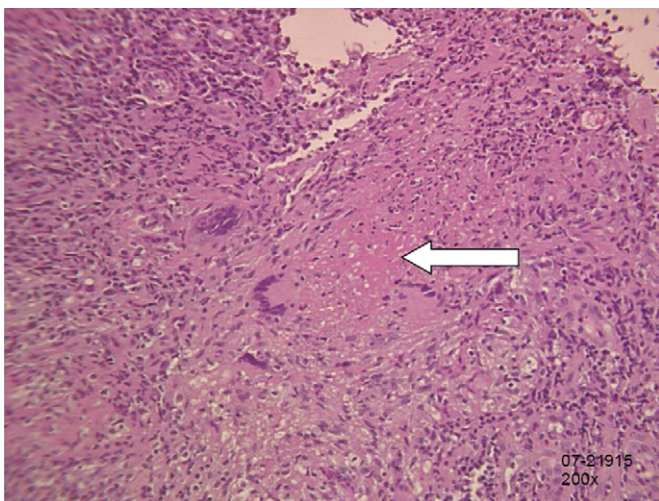


Fig. 2. Necrotizing granulomata (arrow). Collections of epithelioid histiocytes and Langerhans-type giant cells, with an inflammatory cell infiltrate composed of variable numbers of lymphocytes and neutrophils (Hematoxylin and eosin, $\times 200$).

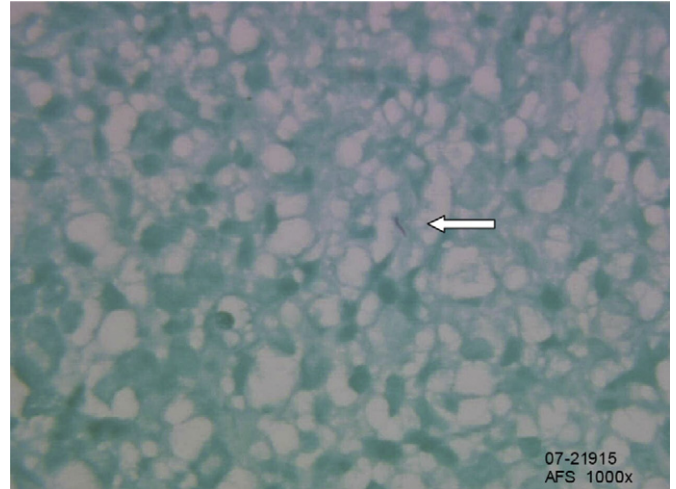


Fig. 3. A slender acid-fast positive bacilli (arrow) (Acid-fast staining, $\times 1,000$).

the chest [2–6]. TB infection of the vulva and vagina is seen in less than 2% of cases with pelvic TB.

TB commonly occurs in association with other diseases and disorders, which alter immune responsiveness, thus causing a predisposition to TB. These disorders include human immunodeficiency virus infection, hematologic or reticuloendothelial malignancies, chronic renal failure, poorly controlled insulin-dependent DM, malnutrition, as well as immunosuppressive therapies. This patient had DM controlled with oral medications for many years, which may have contributed to a predisposition to pulmonary and extrapulmonary TB, as she did not have any of the common risk factors.

In some reports, TB infection has been implicated in 5–10% of infertility cases. It is possible that genital TB would be more frequently diagnosed if this possibility was considered in the evaluation of infertile patients in areas where TB is endemic [7]. Genital organs most frequently affected include fallopian tubes (95–100%), endometrium (50–60%), and ovaries (20–30%) [4]. TB of the vulva and vagina is very rare and it is seen in only 1–2% of genital TB cases [2–4,7–9]. Typically, it usually occurs in women of childbearing age [4].

Although vulvar TB is very difficult to diagnosis before biopsy, it needs to be emphasized that careful management of postmenopausal women is very important, because vulvar malignancy is much more common than TB. Currently, long-term multidrug antituberculosis chemotherapy is the primary treatment of pulmonary and extrapulmonary TB.

References

- [1] Shimouchi A. Tuberculosis problems in the Asia-Pacific region. *Respirology* 2001;6:75–8.
- [2] Carter J, Peat B, Dalrymple C, Atkinson K. Cervical tuberculosis—case report. *Aust NZ J Obstet Gynaecol* 1989;29:270–2.
- [3] Richards MJ, Angus D. Possible sexual transmission of genitourinary tuberculosis. *Int J Tuberc Lung Dis* 1998;2:439 [Letter].
- [4] Chowdhury NN. Overview of tuberculosis of the female genital tract. *J Indian Med Assoc* 1996;94:354–6.

- [5] Sinha R, Gupta D, Tuli N. Genital tract tuberculosis with myometrial involvement. *Int J Gynaecol Obstet* 1997;57:191–2.
- [6] Sutherland AM, Glen ES, Macfarlane JR. Transmission of genito-urinary tuberculosis. *Health Bull (Edinb)* 1982;40:87–91.
- [7] Carter JR. Unusual presentations of genital tract tuberculosis. *Int J Gynaecol Obstet* 1990;33:171–6.
- [8] Chakraborty P, Roy A, Bhattacharya S, Mukherjee S. Tuberculous cervicitis: a clinicopathological and bacteriological study. *J Indian Med Assoc* 1995;93:167–8.
- [9] Nogales-Ortiz F, Tarancón I, Nogales Jr FF. The pathology of female genital tuberculosis. A 31-year study of 1436 cases. *Obstet Gynecol* 1979; 53:422–8.