

## A Case Report; Tuberculosis of the Vulva

Somyod Kitisupornpun, M.D.,<sup>1</sup> Pongsak Mahanupab, M.D.,<sup>2</sup>  
Suntorn Intapibool, M.D.<sup>1</sup>

<sup>1</sup>Department of Obstetrics and Gynecology, Nakornping Hospital, Chiang Mai,

<sup>2</sup> Department of Pathology, Faculty of Medicine, Chiang Mai University

---

**Abstract:** Genital tract tuberculosis is usually secondary to haematogenous spreading from pulmonary or other nongenital tract foci. The most frequent sites of tuberculous involvement in the female genital tract are the fallopian tubes and endometrium, although the cervix and ovary also can be affected. The vagina and vulva are rarely involved. In this report, the authors present a case of chronic ulcerative lesion at the introitus. The patient was treated with various antibiotics, but the ulcer persisted. Tissue biopsy showed typical (classical) tuberculous granuloma and positive acid fast bacilli, which confirmed the diagnosis. Chest x-rays showed infiltration of the right upper lobe. It was planned to treat the patient with antituberculous drugs for 6 months. The result was very good after 6 weeks. In conclusion, this is an example of a rare form of genital tuberculosis, which had good response to antituberculous drugs after long-standing treatment of various antibiotics. **Chiang Mai Medical Journal 2011;50(4):123-128.**

**Keywords:** genital tract tuberculosis, tuberculosis of the vulva, antituberculous drug

---

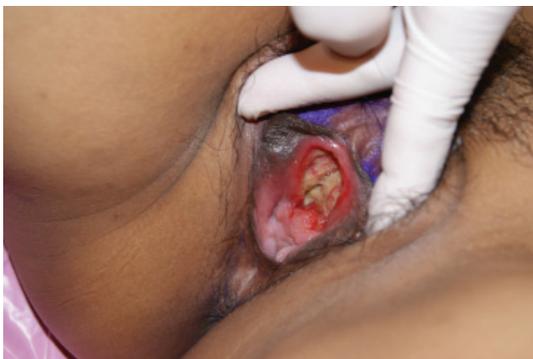
As one of the oldest diseases known to affect humans, tuberculosis is caused by bacteria belonging to the Mycobacterium tuberculosis complex. The disease is usually classified as pulmonary or extrapulmonary. Genitourinary tuberculosis which accounts for about 15% of all extrapulmonary cases, may involve any portion of the genitourinary tract, and is usually due to haematogenous seeding following primary infection. Genital tuberculosis is diagnosed more commonly in females than males. In

females, both fallopian tubes are involved in almost all patients with genital tuberculosis. About one half of patients with tuberculous salpingitis have tuberculous endometritis. Tuberculosis of the cervix is present in 5% of cases. It is uncommon for tuberculosis to involve the vulva and vagina, and is seen in only 2% of patients with genital tuberculosis. In this report, the authors present a case of chronic ulcerative lesion at the introitus or vaginal openings caused by Mycobacterium tuberculosis.

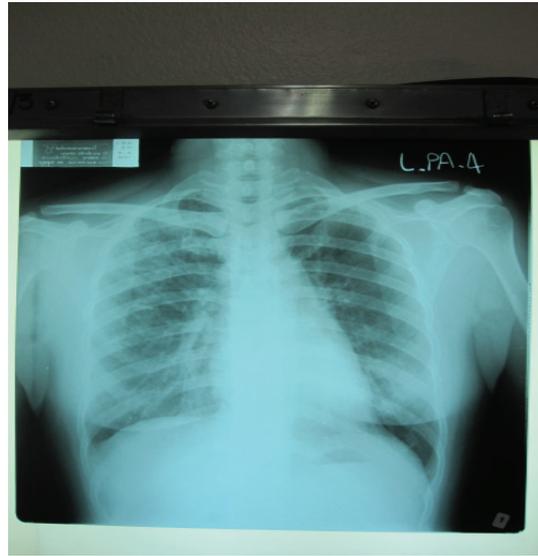
### CASE REPORT

A 27 year old woman (gravid 4, para 4-0-0-4) came to a provincial hospital complaining of a chronic painful ulcer at the external genitalia over the previous 4 months. She had mucopurulent discharge from the vagina and dysuria. Her menstrual cycle was normal and she had no history of weight loss, chronic cough or infertility. She had suffered from pulmonary tuberculosis, but had been cured completely for 10 years. On general examination, she was afebrile, with no lymphadenopathy or other abnormalities. Pelvic examination revealed a large, indurated painful ulcer of 2x3x1 cm diameter at the introitus or vaginal openings, 4-6 o' clock (Fig. 1).

The ulcer had a granulating base and dirty yellow exudate. Minimal white discharge was seen in the vagina. The cervix looked normal, with a normal sized uterus, and there was no abnormality at either adnexae. Chest x-ray revealed a normal heart size, right upper lung with fibropatchy infiltration, and no hydropneumothorax (Fig. 2).



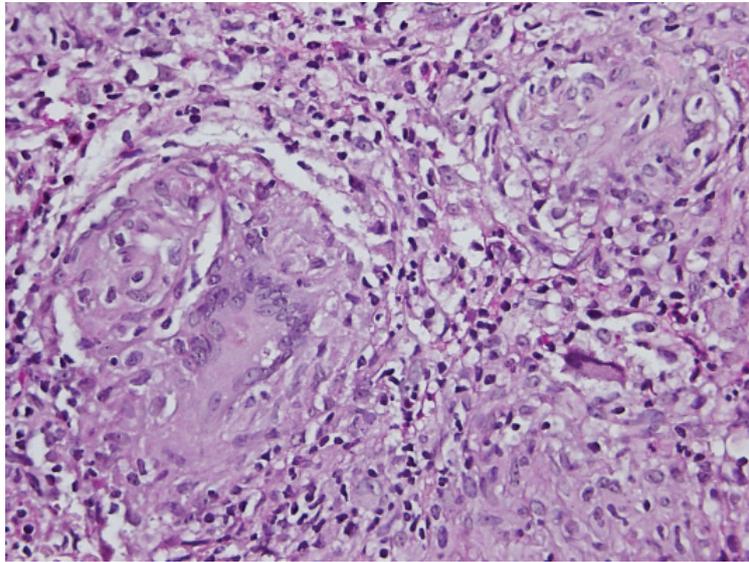
**Figure 1.** chronic ulcerative lesion at the introitus or vaginal openings, 4-6 o' clock



**Figure 2.** Right upper lung fibropatchy infiltration

VDRL and anti-HIV were negative. Fasting Blood Sugar was 109 mg/dL. Transabdominal and transvaginal ultrasonography were performed. The study revealed normal size of the uterus, no abnormal echoic density in either adnexae and no free fluid in the cul-de-sac. The patient was treated with various kinds of antibiotics such as doxycycline, ofloxacin etc., but the ulcer persisted.

Tissue biopsy at the ulcer showed focus of granuloma without necrosis (non-caseating granulomatous inflammation), with Langhans type giant cells, and many nuclei arranged in a horseshoe-like pattern around the periphery of the granulomatous foci, consisting of lymphocytes, histiocytes and epithelioid cells (Fig. 3). Acid fast bacilli (AFB) was found in the tissue section. Sputum and ulcerative discharge for AFB were negative. The patient was treated by standard antituberculous drugs. A six-month regimen included four drugs in the initial phase (isoniacid, rifampicin,



**Figure 3.** Histopathological report; typical (classical) tuberculous granuloma

ethambutal and pyrazinamide) followed by rifampicin and isoniazid in the continuation phase. This treatment was highly effective in this case, with no adverse reaction. After 6 weeks of treatment, the lesion at the right lung and genital ulcer improved (Fig 4) and treatment with antituberculous drugs was planned for 6 months.

### DISCUSSION

Genital tract tuberculosis is usually secondary to hematogenous spreading from pulmonary or other nongenital tract foci.<sup>(1-4)</sup> The most frequent sites of tuberculous involvement in the female genital tract are the fallopian tubes and endometrium, although the cervix and ovary also can be affected. The vagina and vulva are rarely involved.<sup>(4)</sup> The underlying diseases are very advanced pulmonary, intestinal, or rarely, genitourinary tuberculosis.<sup>(2,3)</sup> In patients with active genital disease, the vulva is involved. A small yellowish or reddish nodule appears on the mucosa and breaks down to form a soft circu-



**Figure 4.** Improvement of the lesion after treatment

lar or irregular ulcer with a typical punched-out appearance, and undermined edges. The surrounding mucosa is swollen, edematous, and inflamed. Lesions may be single or multiple and are extremely painful.<sup>(2)</sup> The diagnosis of genital tuberculosis may be suspected from medical history, travel history, and a chest roentgenogram with evidence of healed pulmonary tuberculosis.<sup>(4)</sup> The possibility of genital tuberculosis should be entertained when a positive history of one

or more of the following is obtained;<sup>(5)</sup> family history of tuberculosis, previous tuberculosis, infertility, general malaise, adnexal mass in virgins, and chronic refractory adnexal disease. The clinical symptoms and signs should direct the clinician to diagnosis. However, the disease is so uncommon that it is seldom encountered in the gynecologist's usual practice; therefore, the clinical index of suspicion is generally low. In many cases, the clinical presentation is obscure and the diagnosis delayed.<sup>(3)</sup> Tiwari and coworkers<sup>(6)</sup> suggested that re-emphasis of tuberculosis should be kept in mind when a particular symptom fails to respond to empirical treatment. Chakrabarti and coworkers<sup>(7)</sup> reported that the clinic-pathological aspect of female genital tuberculosis showed typical (classical) tuberculous granuloma of 77.6%, atypical tuberculous lesions of 22.4% and AFB-positive in smear of 81.9%, whereas, AFB-negative was of 18.1%, with a positive culture. Buppasiri and coworkers<sup>(8)</sup> reported a case of vulvovaginal tuberculosis presenting with a large chronic genital ulcer, and positive AFB staining on the tissue biopsy. In other reports,<sup>(9,10)</sup> the frequency of female genital tuberculosis was low because demonstration of AFB (the most important criterion for diagnosis) was difficult. Syphilitic lesion, genital herpes, chancroid, and carcinoma were excluded.

In this case, the authors reported tuberculosis of the vulva, which occurred secondary to pulmonary tuberculosis, due to haematogenous spreading. The patient had been treated with various antibiotics such as doxycycline, ofloxacin etc, but the ulcer persisted. Tissue biopsy confirmed the diagnosis. The other internal genital structures were not evaluated thoroughly, especially via laparoscope or endometrial biopsy. The

most common site of genital tuberculosis is the fallopian tube followed by endometrium. Tuberculosis of the vulva and vaginal orifice is very rare, as in this case. However, the management might not change in these investigations. The authors suggest that, based on clinical estimation, severe disease in the internal structures was unlikely, since normal pelvic examination revealed no adnexal abnormalities, a history of good fertility and normal menstrual pattern. Treatment with antituberculous drugs was planned for a six-month regimen, including four drugs in the initial phase (isoniazid, rifampicin, ethambutol, and pyrazinamide) and rifampicin and isoniazid in the continuation phase. This treatment was highly effective with no adverse reactions. It should be noted, however, that all antituberculous drugs can cause adverse reaction. Isoniazid and rifampicin are both associated with hepatitis, cutaneous hypersensitivity and hemolytic anemia. Isoniazid may cause peripheral neuropathy. Pyrazinamide can cause anorexia, nausea, hepatitis, arthralgia and hyperuricaemia. Ethambutol is associated with retrobulbar neuritis, hepatitis and peripheral neuropathy. Therefore, close monitoring of visual acuity and liver function was performed,<sup>(1)</sup> and the result of treatment was very good after 6 weeks. Combined therapy enhances compliance and reduces the risk of secondary drug resistance. Relapse after treatment is seen in about 1% of cases. Genitourinary tuberculosis responds well to antituberculous drugs.<sup>(1)</sup>

In conclusion, this case signified that chronic ulcer of the vulva refractory responding to empirical antibiotics should address the possibility of tuberculosis. This is an example of a rare form of genital tuberculosis with good response to antitubercu-

lous drugs after long-standing treatment of various antibiotics.

### REFERENCES

1. Raviglione MC, O'Brien RJ. Tuberculosis. In: Braunwald E, Fauci AS, Kasper DL, et al, editors. Harrison's principles of internal medicine. 15<sup>th</sup> ed. New York: McGraw-Hill, 2001:1024-35.
2. Tappeiner G, Wolff K. Tuberculosis and other Mycobacterial infections. In: Freedberg IM, Eisen AZ, Wolff K, et al, editors. Fitzpatrick's dermatology in general medicine. 6<sup>th</sup> ed. New York: McGraw-Hill, 2003:1933-50.
3. Martens MG. Pelvic inflammatory disease. In: Rock JA, Jones III HW, editors. Te Linde's operative gynecology 10<sup>th</sup> ed. Philadelphia: Lippincott Williams & Wilkins, 2003:600-86.
4. Tuomala R. Gynecologic infections. In: Ryan KJ, Berkowitz RS, Barbieri RL, editors. Kistner's gynecology principles and practices. 6<sup>th</sup> ed. St. Louis: Mosby-Year Book, 1995: 496-531.
5. Schaefer G, Bimbaum SJ. Diagnosis of female genital tuberculosis. *Obstetrics and Gynecology* 1956;7(2):180-8.
6. Tiwari P, Pal DK, Moulis D, ChoudhuryMK. Hypertrophic tuberculosis of vulva-a rare presentation of tuberculosis. *Indian J Tuberc* 2010;57: 95-7.
7. Chakrabarti AK, Sen S, Banerjee A, Roy K. Female genital tuberculosis-a retrospective study. *Ind J Tub* 1998;45:101-3.
8. Buppasiri P, Temtanakitpaisan T, Somboonporn W. Tuberculosis at vulva and vagina. *J Med Assoc Thai* 2010;93(5):613-5.
9. Mukta K, Kher A, Sharma KD. Tuberculosis of endometrium- a histopathological study of 385 cases. *Ind J Pathol Microbiol* 1997;20: 39-44.
10. Sammel KC, Gupta P. Tuberculous endometritis. *J Obstet Gynae India* 1967;17:14-8.

## วันโรคที่ปากช่องคลอด

สมยศ กิติสุภรณ์พันธ์, พ.บ.<sup>1</sup> พงษ์ศักดิ์ มหานุภาพ, พ.บ.<sup>2</sup> สุนทร อินทพิบูลย์, พ.บ.<sup>3</sup>

<sup>1</sup>ภาควิชาสูติศาสตร์และนรีเวชวิทยา โรงพยาบาลนครพิงค์,  
<sup>2</sup>ภาควิชาพยาธิวิทยา คณะแพทยศาสตร์ มหาวิทยาลัยเชียงใหม่

---

**บทคัดย่อ:** วันโรคอวัยวะสืบพันธุ์สตรีที่เกิดจากการกระจายไปทางกระแสเลือดมักจะพบการติดเชื้อปฐมภูมิจากปอดหรือจากอวัยวะอื่นๆ โดยพบติดเชื้อส่วนมากที่ท่อนำไข่และเยื่อโพรงมดลูก ส่วนปากมดลูกและรังไข่ก็อาจจะพบได้บ้าง สำหรับช่องคลอดและปากช่องคลอดพบน้อยมาก รายงานผู้ป่วยหญิง 1 ราย มีแผลเรื้อรังที่ปากช่องคลอดที่ตำแหน่ง 4-6 นาฬิกาได้รับการรักษาด้วยยาปฏิชีวนะหลายชนิดอาการไม่ดีขึ้น ผลการตรวจเนื้อเยื่อที่แผลพบว่าเป็นวันโรคและพบว่ามีร่องรอยวันโรคในปอดข้างขวาได้รับการรักษาด้วยยาต้านวันโรคตามเกณฑ์มาตรฐาน 6 เดือน ผลการรักษาแผลเรื้อรังที่อวัยวะสืบพันธุ์ดีขึ้นมากภายในเวลา 6 สัปดาห์ ผู้ป่วยรายนี้เป็นตัวอย่างผู้ป่วยที่แสดงอาการแผลวันโรคที่ปากช่องคลอดที่พบน้อยมากและตอบสนองการรักษาด้วยยาต้านวันโรคเป็นอย่างดี หลังจากการใช้ยาปฏิชีวนะหลายชนิดไม่ได้ผล **เชียงใหม่เวชสาร 2554;50(40): 123-128.**

**คำสำคัญ:** วันโรคอวัยวะสืบพันธุ์, แผลวันโรคที่ปากช่องคลอด, ยาต้านเชื้อวันโรค

---