

## Extrapulmonary genital tuberculosis of the endometrium: A case report

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### Abstract

A case report of a 79 - year - old Greek woman that presented in our hospital with vaginal yellowish discharge, is reported. The patient underwent dilation and curettage, and later a total abdominal hysterectomy, and the histology revealed a rare case of extrapulmonary genital tuberculosis of the endometrium.

**Keywords:** extrapulmonary genital tuberculosis; endometrial tuberculosis

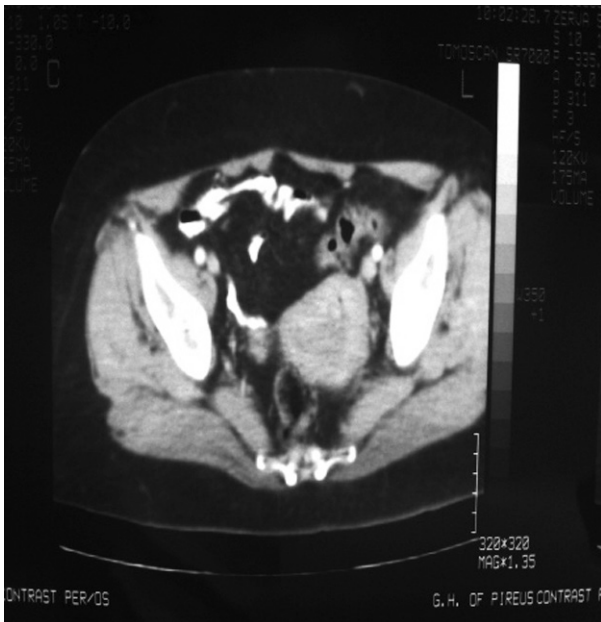
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**T**uberculosis (TB) is a multisystem disease, with many presentations and manifestations; it can affect almost any organ or tissue, excluding only the hair and nails. Genital TB is a very rare pathology of the genital tract in developed countries. On the other hand, it is an important cause of secondary amenorrhea and infertility in developing countries where tuberculosis is endemic<sup>1</sup>.

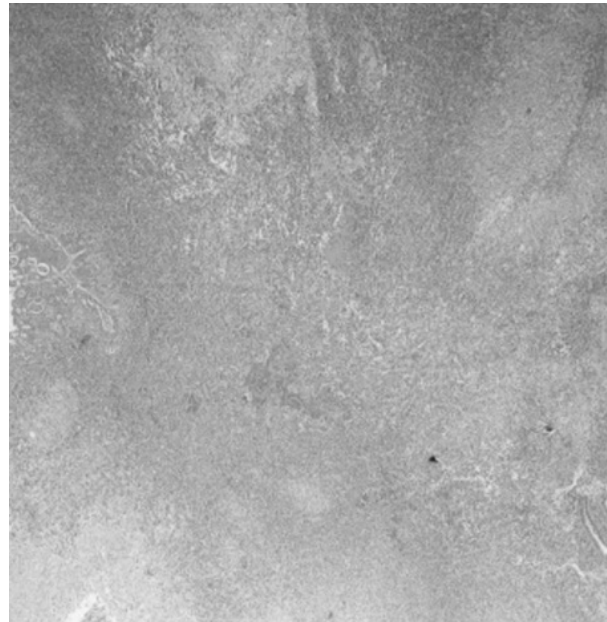
Genital TB occurs mostly secondary to pulmonary TB, commonly by the hematogenous route in a manner similar to the spread of other extrapulmonary sites, including urinary tract, bones and joints. There are though many cases of the disease in the genital tract without any pulmonary involvement. It is reported that sexual transmission of the disease

can lead to extrapulmonary TB of the genital tract, without pulmonary involvement.

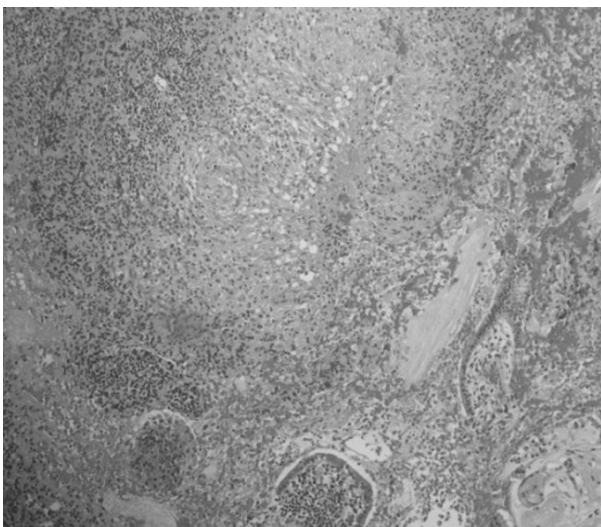
Any part of genital tract can be affected, but the commonest sites are the fallopian tubes and the endometrium. The fallopian tubes are the initial site being involved in almost all cases, with secondary extension to the endometrium, which is involved in approximately 50 - 60% of women with genital TB<sup>2</sup>. Genital TB is typically asymptomatic and patients are usually young women detected during examination for infertility<sup>3</sup>. After menopause, TB of the endometrium is a rare possibility, probably because of the decreased tissue vascularity. We present a case of endometrial TB with postmenopausal vaginal bleeding.



**Figure 1.** Heterogeneous uterus with abnormal size, endometrium hyperplasia and fluid accumulation within the endometrial cavity



**Figure 2.** Pathologic characteristics seen in biopsy samples: fragmented endometrial specimens - endometritis with presence of epithelioid granulomas

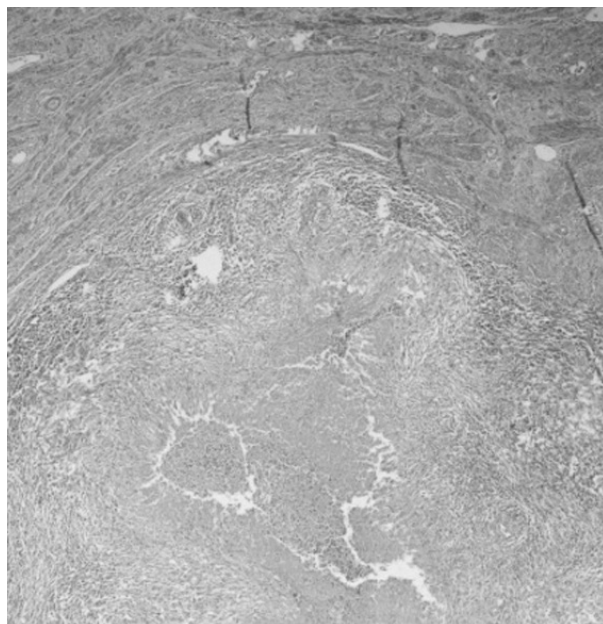


**Figure 3.** Pathologic characteristics seen in biopsy samples: fragmented uterus - epithelioid granulomas with central caseous necrosis

### Case report

A 79 - year - old woman, nullipara with a history of 1 spontaneous miscarriage and 2 induced abortions, presented complaining about an irregular purulent, smelling, vaginal discharge with no abdominal pain, fever or postcoital bleeding. The pa-

tient used only medication for blood pressure control and dyslipidemia and had an appendectomy in youth. She was not smoking nor had problems related to alcohol abuse. The patient had no personal or family history of gynecological or other malignancy and lives alone without children or domestic



**Figure 4.** Pathologic characteristics seen in biopsy samples: fragmented uterus - myometrial epithelioid granulomas

servant. She referred also an episode of pleuritis 60 years ago.

The gynecological examination with speculum revealed a purulent yellowish discharge, coming from the cervix. Bimanual examination revealed an enlarged uterus without any other noteworthy finding. A transvaginal pelvic ultrasound and a computed tomography (CT) was performed and showed a heterogeneous uterus with abnormal size, endometrium hyperplasia and fluid accumulation within the endometrial cavity (Figure 1). After the history and physical examination, endometrial biopsy was performed by dilation and curettage. Blood loss was not excessive and the patient was discharged home the same day. Histologic examination of the curettings revealed endometritis with presence of epithelioid granulomas with central caseous necrosis and Langhans giant cells (Figure 2). A total abdominal hysterectomy was performed and revealed the same histologic patterns (Figure 3, 4).

The patient's hepatitis and human immunodeficiency virus (HIV) status were negative. All hematological and biochemical investigations were normal.

Polymerase chain reaction (PCR) was performed on the formalin - fixed paraffin - embedded tissue and the diagnosis of TB in the endometrium was confirmed (positive for *Mycobacterium tuberculosis*). A chest X - ray showed no evidence of pulmonary TB. The patient received anti - TB treatment (rifampicin, isoniazid, pyrazinamide) and has been closed attended.

### Discussion

TB is nowadays estimated that causes about 3 million deaths worldwide every year<sup>4</sup>. Genital TB, following lymphatic tuberculosis, is the second most common extrapulmonary manifestation of TB and is more common among females. Genital tract TB has been recognised and treated for more than two centuries, although the actual incidence of pelvic TB is still unknown<sup>5</sup>. Genital TB is a very rare disease in the population of Europe. Last decade the large amount of immigration in Europe from developing countries brought increase of these cases in developed world.

Patients with genital TB may have no documented history of the disease or may have evidence of tubercular lesions elsewhere in the body<sup>6</sup>. However, extrapulmonary disease without infection of the respiratory tract remains extremely rare. Genital TB is usually diagnosed during the active period of life because many of these women are investigated for infertility or amenorrhea.

When TB affects endometrium, it causes either acute or chronic endometritis<sup>7</sup>. Hysterosalpingography offers the opportunity to understand better the exact effect of TB on the endometrium. Acute endometritis present as irregularity of the contour of the endometrial cavity, while chronic endometritis is characterized by fibrosis, scarring, and calcification<sup>8</sup>.

Postmenopausal women often do not present any symptoms and are misdiagnosed. Usual symptoms of postmenopausal women are vaginal bleeding or vaginal discharge. In our case, the patient presented irregular purulent vaginal discharge, symptoms that are often described in the international literature. Chest X - ray may be suggestive of past TB

involvement of lungs or it can be completely normal. Our patient presented a completely normal chest X-ray and CT lung scan, despite the fact that she had an episode of pleuritis 60 years ago. Histopathological findings of granulomatous inflammation that revealed also in our patient, with the presence of many epithelioid granulomas with central caseous necrosis are more reliable in the diagnosis of genital TB. PCR, as described in many studies, is a more sensitive and specific test that was also used in our case to confirm the diagnosis. In any case, vaginal discharge presented in postmenopausal women cannot exclude genital TB; nevertheless it's a very rare condition.

### Conclusion

Although the incidence of genital TB is extremely low in developed countries, taking into consideration the increase in TB incidence globally and the increased migratory patterns of people from areas of high TB incidence, clinicians in Greece, and especially gynecologists, should have a high index of suspicion for TB when confronted with a patient with infertility, amenorrhea or abnormal vaginal bleeding. ■

### Conflict of interest

All authors declare no conflict of interest.

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