

# PRIMARY T-CELL LYMPHOMA OF THE UTERINE CORPUS

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Malignant lymphoma involving the genital tract is rare, and primary lymphoma of the uterus is even rarer. Immunohistochemically, most of the reported cases have been diffuse large cell lymphomas with a B-cell nature. Herein, we report an unusual case of uterine T-cell lymphoma in a 68-year-old woman. She suffered from fever, vaginal bleeding, and a huge mass in the lower abdomen. The initial clinical and histologic studies failed to indicate a cell type. We provide the clinical details of the case and discuss the diagnostic pitfalls.

**Key Words:** T-cell lymphoma, uterus  
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Involvement of non-Hodgkin's lymphoma (NHL) in the female genital tract is uncommon, with the ovary being the principal site. Primary NHL of the female genital tract is rarer, accounting for 1.5–2% of extranodal malignant lymphoma, with the majority of cases associated with the ovary, uterine cervix, and vagina, and fewer with the uterine corpus [1]. To our knowledge, fewer than 20 cases of primary lymphoma arising in the uterine corpus have been reported in the literature [2,3]. Most of the reported cases have been diagnosed as diffuse large cell lymphoma by the working formulation and have shown B-cell phenotypes. We report an unusual case of uterine T-cell lymphoma, which was initially diagnosed as a possible necrotic leiomyosarcoma after negative endometrial curettage.

## CASE PRESENTATION

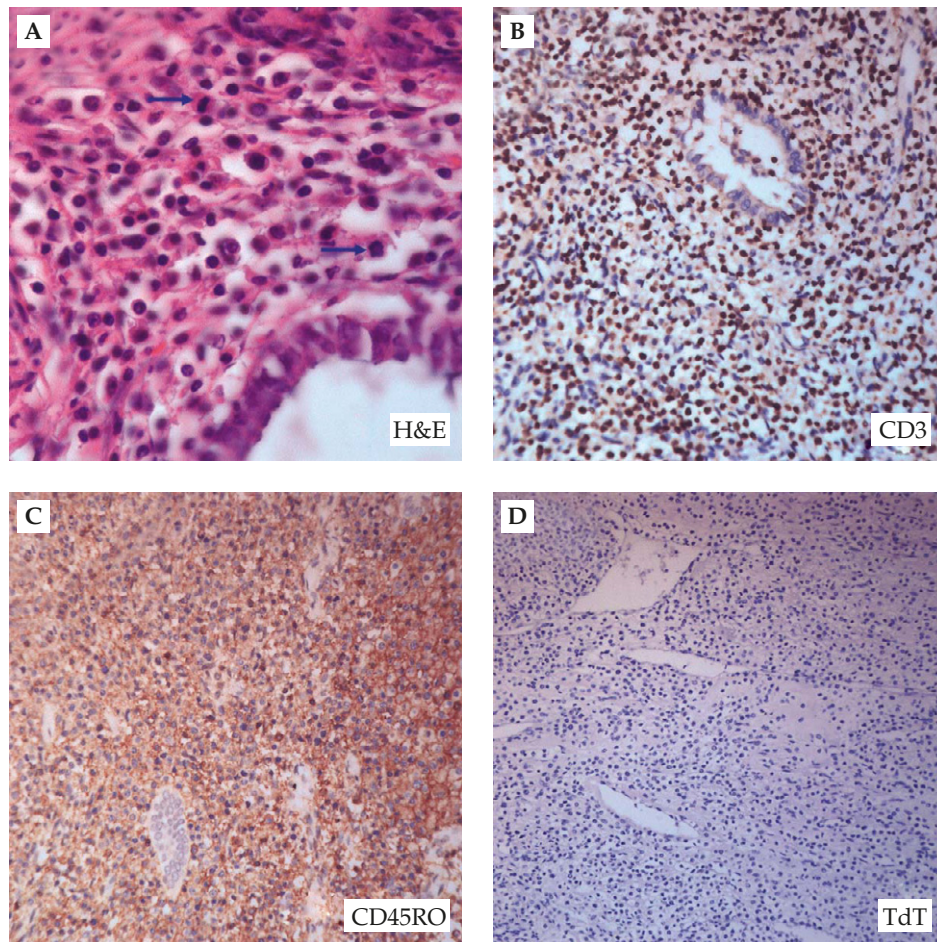
A 68-year-old woman, gravida 4, para 4, who was menopausal without hormone replacement therapy, presented with fever, vaginal bleeding, and lower abdomen pain of 20 days' duration. Physical examination revealed an anemic-looking condition with no peripheral lymphadenopathy or hepatosplenomegaly. Pelvic examination disclosed a necrotic vagina and a bulky uterus. Pelvic ultrasonography confirmed the enlarged uterus, which measured 10.6×7.9×6.2 cm. She subsequently underwent vaginal and cervical biopsy, and endometrial curettage. Vaginal biopsy showed some necrotic debris and a degenerated specimen that was covered by squamous epithelium. Cervical biopsy and endometrial curettage demonstrated absence of malignant cells. Laboratory data, including complete blood count and differential count, showed only an abnormal hemoglobin level (8.7 g/dL). Chest roentgenogram was normal. Computed tomography (CT) scan of the abdomen showed a huge mass, measuring 8.3 cm, with homogeneous enhancement at the uterus. No enlarged pelvic lymph

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**Figure.** (A) Diffuse infiltrates of small to medium-sized lymphoid cells exhibiting round nuclei with clumped chromatin and scattered mitotic figures (arrows) (hematoxylin & eosin, 100 $\times$ ). (B) CD3 and (C) CD45RO reveal positive diffuse immunostain (immunohistochemical stain, 40 $\times$ ). (D) The lymphoma cells are negative with terminal deoxynucleotidyl transferase stain (immunohistochemical stain, 20 $\times$ ).

node was found. Although the cytologic study was negative, a provisional diagnosis of necrotic leiomyosarcoma was made. Total abdominal hysterectomy, bilateral salpingo-oophorectomy, and pelvic lymph node biopsy were carried out. Intraoperative findings revealed no small and large bowel, diaphragm, and peritoneum implants. A bulky uterus with smooth surface was also noted and the adnexa were remarkable.

Microscopically, the sections of myometrium showed diffuse transmural infiltration of medium-sized lymphoid cells with hyperchromatic nuclei and pinkish cytoplasm. The sections of cervix showed diffuse infiltration of atypical lymphoid cells with necrotizing inflammation. Immunohistochemically, the tumor cells were positive for LCA, CD3 and CD45RO, and negative for CD20 and terminal deoxynucleotidyl

transferase (TdT), which suggested peripheral T-cell lymphoma (Figure). To exclude the possibility of leukemia, the patient received peripheral blood and bone marrow smear after operation, which were negative.

## DISCUSSION

Extranodal involvement in NHL is not unusual, and the gastrointestinal tract and skin are the particular sites. Extranodal lymphomas are generally described as being either "primary" or "secondary". The criteria for primary uterine lymphoma were first proposed by Fox and More: (1) clinically confined to the uterus; (2) no evidence of leukemia; (3) a fairly long interval between the primary uterine lymphoma and the secondary tumor [4]. In a large review of 1,467

cases done by the National Cancer Institute, primary NHL of the uterine corpus accounted for about 0.002% of extranodal malignant lymphoma [5]. In this case, clinical examination and CT revealed no tumor other than that in the uterus, and leukemia was absent after peripheral and bone marrow smear examinations. These findings indicate that the patient had primary uterine lymphoma.

Most primary lymphomas of the uterine corpus are NHLs, and the majority of these are diffuse large B-cell types. Immunohistochemical staining can be used to differentiate between B- or T-cell type. In this patient, the tumor had diffuse, medium-sized cell type histologically, and was classified as a peripheral T-cell lymphoma (LCA+, CD3+, CD45RO+, CD20-, TdT-) from immunohistochemistry. The origin of leukemia must be excluded if lymphoma is diagnosed. Hence, bone marrow biopsy was performed after surgery, and it was negative for leukemia. According to the Revised European-American classification of lymphoid neoplasms, peripheral T-cell lymphoma accounts for 6% of NHL cases. Its prognosis is poor and the 5-year survival rate is less than 30% [6]. Because of the rarity of primary NHL of the uterus, the optimal treatment protocol is unclear. Most clinicians favor simple hysterectomy and bilateral salpingo-oophorectomy, chemotherapy, irradiation, and their combinations.

It is difficult to diagnose primary lymphoma of the cervix and corpus by cytologic examination. Cervicovaginal cytology plays only a limited role in the diagnosis of primary or secondary lymphoma of the female genital tract, even in an accessible location such as the cervix, because the tumor cells are almost subepithelial and rarely exfoliate without surface ulceration. Usually, the presence of a marked inflammatory exudate masks these tumor cells. On the other hand, endometrial cytology often fails to detect the tumor cells that may result from necrotic tissues in the uterine cavity. Of the 22 malignant lymphomas collected by

Whitaker [7], only five of the 13 cases cytologically examined were positive. In the series of Harris and Scully [8], only two of the 10 cases examined cytologically were positive. In our case, endometrial curettage demonstrated no lymphoma cells. This led us to an incorrect initial diagnosis.

In conclusion, uterine lymphoma is a rare tumor where correct preoperative diagnosis is required. Unfortunately, correct diagnosis may be delayed because the initial cytopathologic study often fails to show malignancy, with the resulting clinical diagnosis often being benign uterine mass. Malignant lymphoma should be kept in mind in patients suffering from uterine mass and unknown fever.

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# 原發性子宮體 T-cell 淋巴瘤

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發生於生殖道的惡性淋巴瘤是一種很少見的腫瘤，而原發性子宮惡性淋巴瘤更是很罕見。根據免疫組織化學染色，大部分是 B-cell 淋巴瘤。在此我們報告一例發生於子宮極罕見 T-cell 惡性淋巴瘤，她是一 68 歲婦女，因為陰道出血，發燒及下腹部腫瘤而就醫。此例在一開始於組織細胞學上無法判斷其腫瘤特性，所以我們報告此病例外也討論診斷上的盲點。

**關鍵詞：**T-cell 淋巴瘤，子宮體

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