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CASE REPORT

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# Lymphoma of the cervix: a case report with review of literature

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**Abstract** Although secondary involvement of the genital tract by non-Hodgkin's lymphoma is not uncommon, primary malignancies are very rare. We describe a case of primary non-Hodgkin's lymphoma of the cervix in a 44-year-old woman. The clinical history and management along with a review of literature regarding this condition is described.

**Keywords** Non-Hodgkin's lymphoma · Cervix · Genital malignancies

## Introduction

Non-Hodgkin's lymphoma (NHL) of the female genital tract as the primary site is extremely rare. Cervical involvement in multi-organ disease is more common than in primary lymphoma. A review of the literature suggests that 1 in 175 extranodal lymphomas in women is likely to originate in the vagina, uterus or cervix [1]. Often the diagnosis of primary lymphoma is not established until after an operation has been performed. We describe a patient with an NHL of the female genital tract as the primary site of presentation.

## Case report

A 44-year-old lady presented with increased bleeding during her periods for the past 6 months. Her cycles were irregular and infrequent. She also complained of increased vaginal discharge during the last three months. There was no history of fever, weight loss or night sweats.

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Her only child, aged 17 years, was conceived following treatment for infertility. She had undergone laparoscopic surgery for the treatment of dysmenorrhoea due to severe endometriosis 12 years back.

Physical examination revealed a cervical fibroid measuring approximately 6×4 cm with congested superficial veins. A pap smear showed inflammatory cells with no evidence of malignancy. She was HIV-negative. Other preoperative investigations were within normal limits.

A total laparoscopic hysterectomy with bilateral salpingo-oophorectomy was performed with a presumptive diagnosis of a cervical fibroid. Intraoperatively, the uterus and adnexa appeared normal except for the presence of tubo-ovarian adhesions. The postoperative period was uneventful. Histopathological examination revealed a diffuse large B cell lymphoma of the cervix and evidence of endometriosis in both the ovaries.

Six courses of cytotoxic chemotherapy according to the CHOP protocol (cyclophosphamide, adriamycin, vincristine and prednisolone) were administered on a monthly basis. GMCSF support was required following the first cycle for severe leucopenia.

She has been followed up for the last 3 years, is symptom-free and there is no disease activity.

## Discussion

Lymphomas involving the genital tract are uncommon; primary lymphomas are still rarer. Lymphomas involving the cervix account for less than 1% of cervical malignancies. Involvement of the cervix in lymphoma as part of widespread disease is much more common than primary disease. The cervix is more frequently affected than the corpus of the uterus.

The age at presentation ranges from 20 to 80 years, with the median age varying from 40 to 59 years [2, 3]. Abnormal uterine bleeding is the most common presenting symptom of primary malignant lymphoma of the cervix [3]. Other symptomatology may include abdominal or pelvic discomfort, dyspareunia, back pain, or vaginal

discharge [4]. Very infrequently, the tumours are discovered as a result of a routine examination. Rarely, they may present during pregnancy leading to obstructed labour [5]. B symptoms are usually not a feature [6].

Cervical enlargement can be seen on pelvic examination as primary cervical lymphomas cause diffuse or multinodular cervical enlargement, with minimal or no changes in the epithelium. The findings on cervical cytology in these patients with lymphoma are variable. In most cases the cervical smear is negative, which is probably due to the fact that these tumours infiltrate the cervical stroma, and the squamous and glandular epithelial lining is initially preserved. Positive cytology may be seen if there is ulceration. A deep cervical biopsy and endocervical curettage may give a definite diagnosis[7].

Pretherapy evaluation should include computerized tomography (CT) or magnetic resonance imaging (MRI) of the pelvis and abdomen to determine lymph node status. Cervical lymphoma can occasionally be distinguished from cervical carcinoma by means of MRI. The lack of involvement of the mucosa, as well as sparing of the cervical stroma and the uterine junctional zone, are the most important findings to differentiate cervical lymphoma from carcinoma, and are best evaluated with T2 turbo spin echo sequences. Post-contrast images help to delineate the extent of the disease [8].

Precise aetiological factors for the development of cervical lymphomas are not known. Human immunodeficiency virus infection should be considered in extra nodal lymphomas.

The majority of lymphomas of the cervix are of the diffuse large B cell type, but other subtypes have been described, including follicular lymphomas [5]. Sarcomatoid B cell lymphomas [9] and T cell lymphomas [10] of the cervix are extremely rare.

The prognosis of cervical lymphoma is good, even when locally advanced at presentation. Extent of disease, size of primary tumour, and type of lymphoma are significant prognostic features, but because of its rarity, the standard treatment has not been established. Treatment options for lymphomas of the genital tract include surgery, chemotherapy and radiotherapy.

As most cases are diagnosed after surgery, the options include chemotherapy with or without radiotherapy. In cases diagnosed before surgery, primary radiotherapy—external beam followed by brachytherapy [2]; surgery followed by chemotherapy [11]; and radiotherapy or neoadjuvant chemotherapy followed by surgery [12] have all been advocated. There is no advantage of performing radical surgery in cases of cervical lymphomas [13].

Stroh et al. considered a combination of chemotherapy and radiotherapy more effective than chemotherapy alone [14]. The advantage of using chemotherapy instead of irradiation is the preservation of ovarian function, as well as prevention and control of micrometastases [13, 15].

This case serves to create awareness of the possibility of the involvement of the female genital tract in non-Hodgkin's lymphoma. The diagnosis may be overlooked in cases in which the appearance may suggest a cervical fibroid or polyp. This may be compounded by a negative cytology report. Histology and immunochemistry are essential to reach a correct diagnosis. Hence, a cervical biopsy is needed for the confirmation of diagnosis. Although a rare malignancy, the condition has a good prognosis with therapy.

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