

Non-Hodgkin Lymphoma of Cervix: An Unusual Presentation

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ABSTRACT

Non-Hodgkin Lymphoma is diverse and often subdivided into diffuse large B-cell lymphoma, peripheral T-cell lymphoma, Burkitt's lymphoma, mantle cell lymphoma and AIDS-related lymphoma. Primary lymphoma involving the uterine cervix is very rarely encountered. We are presenting here a case with post menopausal bleeding with provisional diagnosis of poorly differentiated cervical carcinoma. Radical hysterectomy (type II) with bilateral pelvic lymph node dissection was done. Specimen is sent for histopathological examination and it was reported as diffuse round cells proliferating in an apparently unorganized fashion, with hyperchromatic nuclei and scanty cytoplasm and prominent nucleoli with possibility of poorly differentiated carcinoma or Non-Hodgkin lymphoma involving cervix. Immunohistochemistry study showed expression of CD 20 and negative expression of CD3 there by confirmed the diagnosis of diffuse large B cell type (DLBCL) Non-Hodgkin lymphoma of uterine cervix. The incidence of extranodal Non-Hodgkin Lymphoma is increasing. So, Clinicians and pathologists should be aware of this diagnosis in patients presenting with abnormal vaginal bleeding, and negative papanicolaou test.

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Introduction

Non-Hodgkin Lymphoma (NHL) is diverse and often subdivided into diffuse large B-cell lymphoma (DLBCL), peripheral T-cell lymphoma (PTCL), Burkitt's lymphoma, mantle cell lymphoma (MCL) and AIDS-related lymphoma. Primary lymphoma involving the uterine cervix is very rarely encountered. It is varying in presentation due to associated cervicitis for inflammatory reaction and non-specific symptoms like foul smelling discharge or vaginal bleeding and may mimic like cervical carcinoma.^[1] Isolated genital tract extranodal disease accounts for less than 1% of NHL^[2]. We are describing here a case presented with post-menopausal bleeding with provisional diagnosis of cervical carcinoma but ultimately proved to be a case of primary involvement of cervix of non-Hodgkin Lymphoma.

Case Report

A 66 years old multiparous woman presented with post menopausal bleeding for 2 months. There was no history of fever, night sweats, or weight loss. She was hypertensive on medication. She attained menopause 17 years back and had no episode of bleeding per vagina before this event. On general physical examination, there was mild pallor. There was no lymphadenopathy or hepatosplenomegaly. Other systemic examination was normal. Per speculum examination extremely soft and hypertrophied cervix which bleeds on contact. Internal bimanual examination revealed bulky uterus but no other obvious pelvic abnormality. Ultrasonography showed bulky uterus measuring 10.15cmX5.89cm X4.72cm with large collection in endometrial cavity. Her routine biochemical investigations (including HIV serology) and chest X ray were normal. She underwent examination under anesthesia and proceeded for cervical and endometrial biopsy. Histopathological examination of biopsy specimen revealed poorly differentiated carcinoma or non-Hodgkin's lymphoma of cervix. Laparotomy was performed under general anesthesia. After opening the abdomen uterus was diffusely enlarged, soft in consistency with multiple enlarged parametrial, internal iliac, external iliac and obturator lymph nodes. There was a large, soft, vascular mass in the cervical region. (fig 1) Radical hysterectomy (type II) with bilateral pelvic lymph node dissection was done. There was no palpable para-aortic lymph node. Other intra abdominal structures and peritoneum were healthy. Specimen was sent for histopathology. It reported as diffuse round cells proliferating in an apparently unorganized fashion, with hyperchromatic nuclei and scanty cytoplasm and prominent nucleoli, possibility of poorly differentiated carcinoma or Non Hodgkin's lymphoma involving cervix. (fig2&3) Immunohistochemistry study showed expression of CD 20 and negative expression of CD 3(fig4&5) there

by confirmed the diagnosis of diffuse large B cell type non-Hodgkin's lymphoma of uterine cervix.

Discussion

Primary malignant lymphoma of the female genital tract, a rare form of extranodal non-Hodgkin's lymphoma (NHL), can occur in the ovary, uterine corpus, cervix, vagina, and vulva. The ovary is the most frequent site for NHL involvement of the gynecological tract^[3]. Primary malignant lymphoma of the cervix is a rare disease. It is accepted that the diagnosis of primary lymphoma of the cervix must fulfill the criteria proposed by Fox and More (1965). The case at hand fulfilled these criteria, which included a lesion confined to the cervix on diagnosis, and no evidence of lymphoma in other organs for at least several months during follow up^[4]

Cervical lymphoma presents either as primary or systemic involvement. In our study only cervix was involved. The diagnosis is difficult to make clinically. NHL arising from the cervix is mostly high grade diffuse large B cell type, but other types are also encountered such as follicular lymphoma.

Abnormal vaginal bleeding is a common presenting symptom^[1] Other presenting complains include vaginal

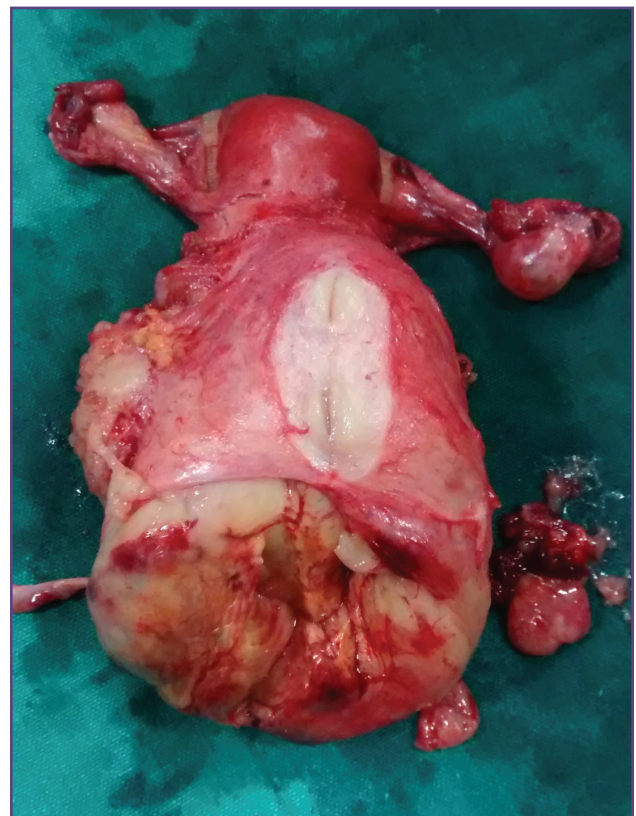


Fig. 1: Gross picture showing mass in cervix

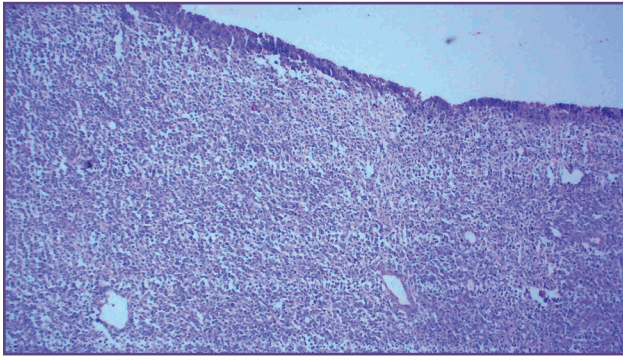


Fig. 2: Picture showing diffuse large B cell lymphoma involving cervix (x100 H&E)

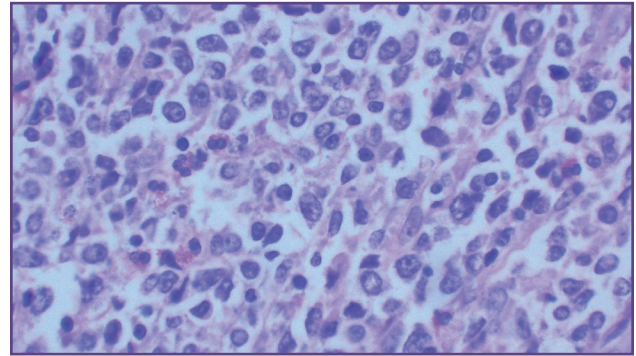


Fig. 3: Diffuse sheets of tumor cells with round nuclei, scanty cytoplasm and prominent nucleoli (H&E, 400x)

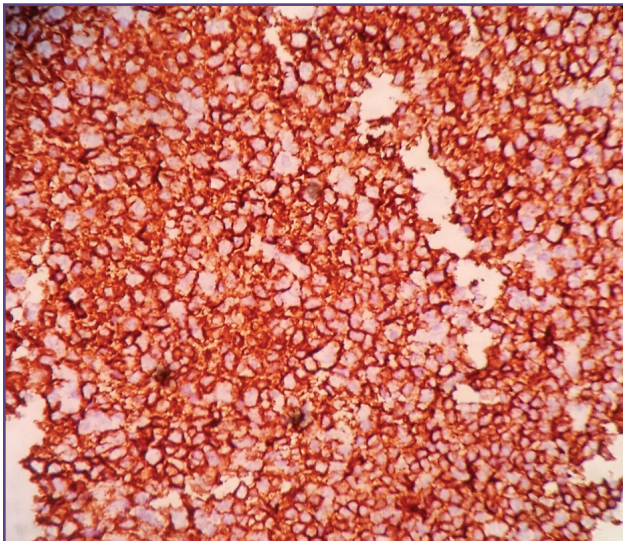


Fig. 4: Immunohistochemical stain showing diffuse positivity of tumor cell for CD20 (x100).

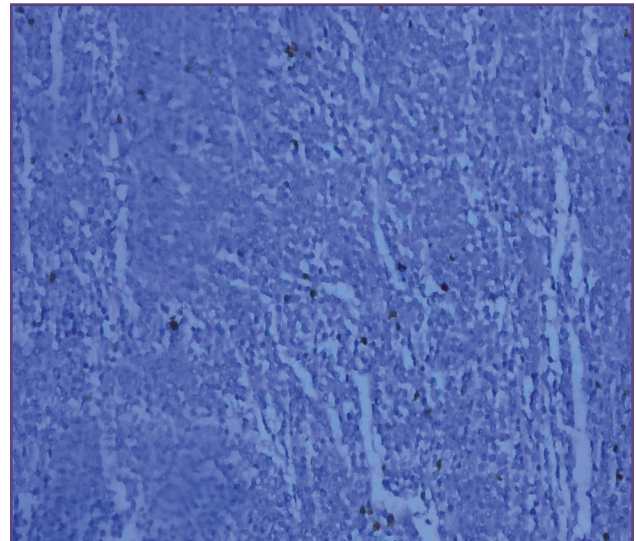


Fig. 5 :Showing negative expression of CD3 (100X)

discharge, dyspareunia or pelvic pain. Systemic symptoms like fever, weight loss and peripheral lymphadenopathy was not a feature in our case. The etiology of NHL has been hypothesized to include infectious agents such as the human immunodeficiency virus (HIV), immunosuppressive therapies, environmental exposures to pesticides and pollutants, and improved diagnostic technique.^[5] Our case was not associated with HIV. An important differential diagnosis is with lymphoma like lesions resulting from focally florid lymphoid proliferations associated with chronic cervicitis or as an expression of infectious mononucleosis.^[6] These are identified by polymorphic nature of infiltrate including mature plasma cell, small lymphocytes and neutrophils, surface ulceration. Other frequent misdiagnosis in cervical lymphomas includes sarcoma, poorly differentiated carcinoma, neuroendocrine tumors and chronic inflammation.^[7] The cervical cytology in these patients with lymphoma is negative, which is

probably due to the fact that most lymphomas in this location are subepithelial unless there is ulceration.^[8] Immunohistochemistry is of paramount importance to confirm the diagnosis. Though any single marker is not specific but a panel of markers which includes leukocyte common antigen (LCA), B-cell markers (CD20 and CD79a), T-cell markers (CD3 and CD5) and other markers like CD23, bcl-2, bcl-6, CD10, cyclinD1, CD15, CD30, ALK-1, CD138 (based on cyto-architectural pattern) may be expressed by tumor cells.^[9] Our case showed positive expression of CD 20, and negative expression of CD3. So it is a NHL of B-cell type.

Cervical lymphoma generally has a good prognosis as compared to nodal lymphomas, with an overall median survival of four years. Extent of disease, size of primary tumor and the type of lymphoma are significant prognostic features. However, Stroh et al. developed an the International Index score consisting of age of the patient,

Ann Arbor stage, number of extranodal sites, performance status, and serum lactic dehydrogenase values, which could be used to predict the outcome for uterine and cervical lymphomas.^[10] Patients with advanced-stage diffuse large B-cell lymphoma are primarily treated with chemotherapy. Radiotherapy is considered, if there is bulky disease during presentation.^[10]

Conclusion

Although primary non Hodgkin's lymphoma is rare, the disease may be encountered more frequently as the incidence of extranodal non-Hodgkin's Lymphoma is increasing. Cervical cytology may be non-diagnostic in such cases. Therefore, Clinicians and pathologists should be aware of this diagnosis in patients presenting with abnormal vaginal bleeding and negative papanicolaou test and to include cervical lymphomas in the differential diagnosis of gynaecological cancers.

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None

Competing Interests

None

Reference:

1. Vasudev DS, Kaler AK. Non-Hodgkin's Lymphoma of the Uterine Cervix. *Online J Health Allied Scs.* 2012; 11(1):13.
2. Komaki R, Cox JD, Hansen RM, Gunn W, Greenberg M. Malignant lymphoma of the uterus and cervix. *Cancer* 1984; 54: 1699-1704.
3. Vang R, Medeiros LJ, Fuller GN, Sarris AH, Deavers M. Non-Hodgkin's lymphoma involving the gynecologic tract: a review of 88 cases. *Adv Anat Pathol*,2001;8, 200-17
4. Fox H, More JRS. Primary malignant lymphoma of the uterus. *J Clin Pathol*, 1965:18, 723-728.
5. Trenhaile TR, Killackey MA. Primary pelvic Non-Hodgkin's Lymphoma. *Obstetrics and Gynecology*.2001 ;97:717-720
6. Young RH, Harris NL, Scully RE. Lymphoma like lesions of the lower female genital tract: a report of 16 cases. *Int J Gynecol Pathol* 1985, 4: 289-99.
7. Charlton I, Norris J, King FM. Malignant reticuloendothelial disease involving the ovary as a primary manifestation. *Cancer.* 1974; 34:397-407.
8. King J, Elkhalfa M, Michael C. Malignant lymphoma identified on cervical cytologic smear with Immunophenotypic analysis. *Acta Cytologica* 1996;40:1228
9. Rao IS. Role of immunohistochemistry in lymphoma. *Indian Journal of Medical and Paediatric Oncology : Official Journal of Indian Society of Medical & Paediatric Oncology.* 2010; 31(4):145-147.
10. Stroh EL, Besa P, Cox D et al. Treatment of patients with lymphomas of the uterus or cervix with combination chemotherapy and radiation therapy. *Cancer.*1995; 75:2392-2399.