

Primary Cervico-Vaginal B-cell Lymphoma with Immunohistochemical Confirmation: A Case Study

Preeti Agarwal¹, Garima Agarwal², Divya Singh², Madhu Mati Goel³

¹Assistant Professor, Department of Pathology, King George's Medical University, Lucknow, Uttar Pradesh, India, ²Junior Resident, Department of Pathology, King George's Medical University, Lucknow, Uttar Pradesh, India, ³Professor, Department of Pathology, King George's Medical University, Lucknow, Uttar Pradesh, India

Abstract

Non-Hodgkin's lymphoma (NHL) involving lower female genital tract is a rare event. Described presenting clinical symptoms in a literature in these patients are vaginal discharge and bleeding. Here with the report, a case of primary cervico-vaginal lymphoma in an old lady presenting with utero-vaginal (UV) prolapse. On clinical examination, there was second degree UV prolapse. Pelvic ultrasound showed a large hypo echoic mass involving the vagina with increased vascularity. To our surprise the sections from diffusely thickened vagina wall revealed high-grade round cell tumor which was diagnosed as NHL (B-cell type) by immunohistochemistry. To confirm primary vaginal involvement detailed clinical, radiological, and hematological examination was performed. The management of this disease is not well-defined in the literature. In our case, post-hysterectomy, no further treatment was offered to the patient; on 18 months follow-up she is doing well with no complaints.

Key words: Cervico-vaginal lymphoma, High-grade round cell tumor, Immunohistochemistry, Prolapse, Non-Hodgkin's lymphoma

INTRODUCTION

Primary extra nodal malignant lymphomas may occur in the female genital tract in about 30% of cases. Most of them are Non-Hodgkin's lymphoma (NHL) involving; in order of frequency are ovary (50%), uterus (30%), tubes (10%), vagina (6%), and vulva (4%).¹ Hence, NHL involving the vagina and moreover cervix as the primary site is extremely rare. The majority of NHLs arising at this site are high-grade lymphomas with diffuse large B-cell histotype.² Histomorphological differentials in these cases include poorly differentiated malignancies namely small cell variant of squamous cell carcinoma (SCC) and round cell tumors. Immunohistochemistry (IHC) is must to diagnose and confirm.

Though few cases have been reported in the literature all of these patients presented with vaginal discharge and bleeding

We came across such a diagnosis, but the presenting clinical symptom was utero-vaginal (UV) prolapse.

CASE REPORT

A 55-year-old postmenopausal lady, P₃₊₁, presented with complaints of something coming out of vagina from past 6 months, followed by persistent pain in the lower abdomen from past 4 months and post-menopausal bleeding since 20 days. There was associated burning micturition present. The patient was on medications for hypertension.

Her systemic examination was largely unremarkable. On per speculum examination, there was prolapsed uterus. Abdominal Ultrasound revealed cervix showing split anterior and posterior lips with a large hypo echoic mass filling the vagina showing vascularity with size of 5.4 cm × 3.7 cm × 6.0 cm. The lady was operated with a clinical diagnosis of UV prolapsed with suspicion of malignancy of cervix and/or vagina.

Total abdominal hysterectomy and bilateral salphingo-oopherectomy were done under general anesthesia. Intraoperatively, post-menopausal uterus measuring 5.7 cm × 4 cm × 2.6 cm, along with bilateral adnexa were

Access this article online



www.ijss-sn.com

Month of Submission : 09-2015
Month of Peer Review : 10-2015
Month of Acceptance : 11-2015
Month of Publishing : 11-2015

Corresponding Author: Dr. Preeti Agarwal, Department of Pathology, King George's Medical University, Lucknow - 226 003, Uttar Pradesh, India. Phone: +91-09822114700. Fax:+91-5222257539. E-mail: preavn@gmail.com

found. The vagina was diffuse thickened. The specimen was sent for histopathological examination.

We received hysterectomy with bilateral salpingo- oophorectomy. Uterus measured 8.5 cm × 4 cm × 1.5 cm with posterior wall thickness measuring 1 cms, on gross. Cervical lips were grossly hypertrophied and elongated. The vagina was thickened and rubbery; measured 3 cm in length with a wall thickness of 1.8 cm (Figure 1a). Both the ovaries and fallopian tubes were unremarkable on gross.

Representative tissue pieces were embedded, processed, stained with hematoxylin and eosin and examined microscopically. Sections from the cervix and vagina showed flattened lining along with infiltration of cervical and vaginal stroma by medium to large abnormal round to oval tumor cells with the high nucleo-cytoplasmic ratio, clumped chromatin, prominent to inconspicuous nucleoli, and scant amount of cytoplasm, intermixed with few reactive mature lymphocytes (Figure 1b and c). Surgical resection margin of the specimen was free from tumor infiltration. The section from the uterus showed endometrium in the secretory phase. Sections from the bilateral adnexa showed normal histology.

Morphological differentials which were considered were a high-grade epithelial tumor, small cell variant of SCC, NHL, high-grade mesenchymal tumor, adnexal tumor, malignant melanoma, high-grade neuroendocrine tumor. Tumor cells were negative for cytokeratin (Figure 2c), desmin, S-100, HMB-45, chromogranin, and CD99. There was diffuse immunoexpression for leukocyte common antigen (Figure 1d) with focal vimentin expression. For definitive typing after immunohistochemical confirmation of Lymphoma added IHC CD3, CD20, CD5, and CD10 was done. Diffuse immunoexpression of CD20 (Figure 2a) was seen with background cells displaying CD3 (Figure 2b) expression. All other markers were negative (Figure 2c and 2d).

CT whole abdomen, positron emission tomography (PET) scan with bone marrow aspiration and biopsy were performed. No uptake was found on PET scan. There was no lymphadenopathy (abdominal or retroperitoneal) on CT. Bone marrow smears showed normoblastic hematopoiesis.

Finally, diagnosis of primary cervico-vaginal B-cell lymphoma was made. As the disease was limited to cervix and vagina only and there was further uptake on PET, the patient was kept under conservative management. On 18 months follow-up, the lady is completely asymptomatic.

DISCUSSION

Primitive lymphomas are unexpected diseases in the female genital tract, particularly in the uterus and vagina; therefore,

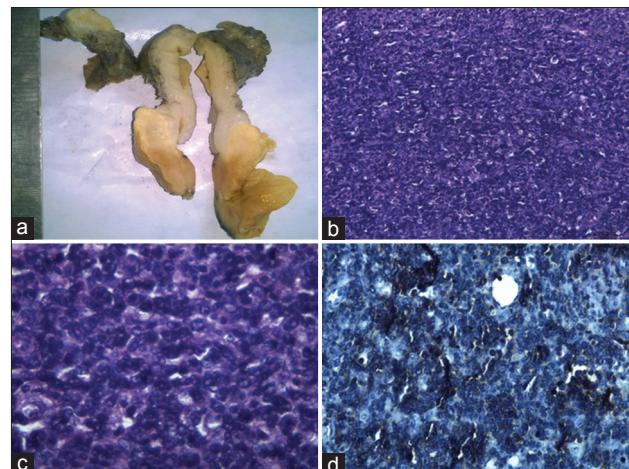


Figure 1: Gross specimen showing atrophic uterus, along with hypertrophied and elongated cervical lips and vaginal wall with a waxy appearance (a). H and E section shows the diffuse arrangement of monomorphic round cells with no intervening stroma $\times 40$ (b), with higher magnification view in (c), $\times 400$. Tumor cells show immunoexpression for leukocyte common antigen in (d) $\times 100$

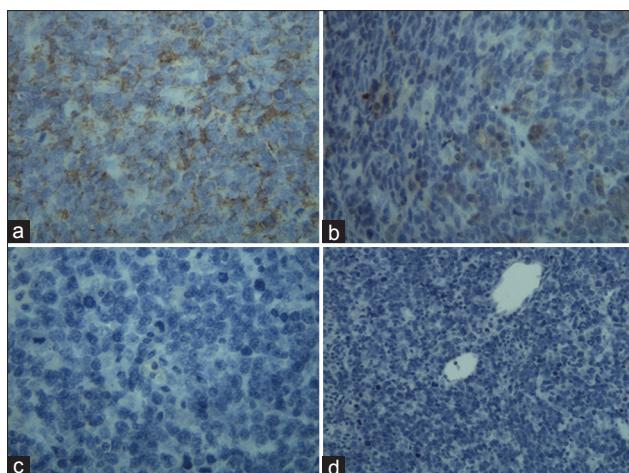


Figure 2: Abnormal lymphoid cells showed diffuse immunoexpression for CD20 (a), there were few scattered cells in background which were positive for CD3 (b). But, there was no immunoexpression for cytokeratin and CD10 (c and d)

they are likely to be misdiagnosed as either inflammatory diseases or other types of malignancies.³ NHL should be suspected there is diffuse infiltration by monomorphic cell population with clumped chromatin and conspicuous to inconspicuous nucleoli and scant cytoplasm complimented with thickened homogenous waxy thickening on gross (Figure 1a-c). But, then also definitive confirmation by IHC should be performed in all suspected cases.

The age at presentation ranges from 20 to 80 years, with the median age varying from 40 to 59 years. 70% of these tumors are of diffuse large cell type, and 20% are low-grade follicular lymphomas.⁴ The present lady was the 55-year-old female. Most frequent clinical symptom associated with

vaginal lymphomas reported is discharge or bleeding per-vaginum. Our case is unusual that the mass caused UV prolapse instead. The present case was diffuse large B-cell lymphoma, morphologically the tumor cells were medium to large, and there was frequent mitotic activity. The tumor was limited to vagina and cervix; the best part was that unknowingly complete excision of the tumor was made on the initial surgery.

The histology of cervico-vaginal lymphomas is similar to that observed in the primary nodal presentation. The prognosis of uterine and vaginal lymphomas is relatively good, particularly when compared to ovarian lymphoma: Overall survival is over 70%, which is fully comparable with other extra nodal presentations and far better than that of ovarian localization (30%).³

It is due to the lack of agreement regarding the effectiveness of various modalities as a consequence of its low incidence. Treatment of lymphoma of the cervix may involve irradiation therapy alone, irradiation combined with hysterectomy.² Few authors have reported the successful management of by neo-adjuvant chemotherapy alone.⁵ But as no post-surgery uptake was seen on PET scan, the patient was kept on conservative management. Post complete removal of the tumor mass the patient

is apparently asymptomatic on 18 months follow-up evaluation.

CONCLUSION

Our case was unusual clinically as even on ultrasound the patient was not suspected to have NHL; moreover, there was no lymphadenopathy. Only histopathology and IHC could diagnose; moreover, we support the present literature that cervico-vaginal involvement by NHL is a rare event, but the over-all prognosis of the patient is good if the disease is limited.

REFERENCES

1. Liang R, Chiu E, Loke SL. Non-Hodgkin's lymphomas involving the female genital tract. *Hematol Oncol* 1990;8:295-9.
2. Garavaglia E, Taccagni G, Montoli S, Panacci N, Ponzoni M, Frigerio L, et al. Primary stage I-IIIE non-Hodgkin's lymphoma of uterine cervix and upper vagina: Evidence for a conservative approach in a study on three patients. *Gynecol Oncol* 2005;97:214-8.
3. Lonardi F, Ferrari V, Pavanato G, Bonciarelli G, Jirillo A, Balli M. Primary lymphoma of the vagina. A case report. *Haematologica* 1994;79:182-3.
4. Paul PG, Aby K, Tony T. Lymphoma of the cervix: A case report with review of literature. *Gynecol Surg* 2006;3:226-7.
5. Szánthó A, Bálega JA, Csapó Z, Sréter L, Matolcsy A, Papp Z. Primary non-Hodgkin's lymphoma of the uterine cervix successfully treated by neoadjuvant chemotherapy: Case report. *Gynecol Oncol* 2003;89:171-4.

How to cite this article: Agarwal P, Agarwal G, Singh D, Goel MM. Primary Cervico-Vaginal B-cell Lymphoma with Immunohistochemical Confirmation: A Case Study. *Int J Sci Stud* 2015;3(8):201-203.

Source of Support: Nil, **Conflict of Interest:** None declared.