

Case Report

Uterine non-Hodgkin lymphoma: a case report and review of literatures

Folasade D. H. Olalere^{1*}, Abraham F. Adeyeye², Taiwo O. Kuye¹, Adeyemi F. Tijani²,
Fatimah A. Rabi², Abiodun R. Bamiro³, Akinsegun Akinbami⁴

¹Department of Obstetrics and Gynaecology, ⁴Department of Hematology and Blood Transfusion, Lagos State University College of Medicine, ²Department of Obstetrics and Gynaecology, ³Department of Hematology and Blood Transfusion, Lagos State University Teaching Hospital, Ikeja, Nigeria

Received: 01 January 2021

Revised: 08 February 2021

Accepted: 10 February 2021

*Correspondence:

Dr. Folasade D. H. Olalere,

E-mail: Folasade.olalere@lasucom.edu.ng

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Primary extra nodal non-Hodgkin lymphomas of the genital tract are uncommon, and involvement of the uterine corpus is not only extremely rare but lacks pathognomonic signs and symptoms, resulting in delayed diagnosis and treatment. This prompted this case report of a multiparous lady who presented with recurrent bleeding per vaginam and progressive abdominal swelling that was initially suspicious of being uterine sarcoma, but histological analysis of excised sample was diagnostic of non-Hodgkin lymphoma of the uterus. The report also highlights the challenges to diagnosis and management in a resource poor setting where advanced diagnostic aids are not readily accessible. The diagnosis of uterine non-Hodgkin lymphoma, though uncommon, should be considered in any patient with an abdominal/pelvic mass and/or abnormal bleeding per vaginam.

Keywords: Non-Hodgkin lymphoma, Uterine, Abnormal vaginal bleeding, Extra-nodal lymphoma, Case report

INTRODUCTION

Non-Hodgkin lymphomas (NHL) are hematological malignancies of lymphatic cells. They may stem from lymphatic organs like the lymph nodes, spleen or Waldeyer's ring in which case they are termed primary nodal non-Hodgkin lymphoma. They may also originate from non-lymphatic tissues/organs like the liver, kidney, thyroid, skin, and gastrointestinal tract. In this case, they are termed extranodal.¹

Though there are controversies surrounding the classification of NHLs with extra lymphatic involvement with resultant variability in reported incidence from various studies, extra nodal NHLs are not as common as primary nodal NHL and commonly involved sites include the gastrointestinal tract, bone, testis, salivary gland,

thyroid, liver, kidney, and the adrenal glands.^{2,3} Available literatures indicate that primary extra nodal NHL of the female genital tract is very uncommon and the majority do not involve the uterine corpus, the ovary and uterine cervix being the more commonly affected sites.^{2,4} Also, the most common histologic subtype in developing countries is the diffuse large B-cell lymphoma (DLBCL) as opposed to follicular lymphoma in developed countries.^{2,3,5}

We present the report of a 40 year old P2+4 lady who presented at our facility with 8 months history of recurrent bleeding per vaginam and 4 months history of progressive abdominal swelling. She was initially suspected to be a case of uterine sarcoma, but histology findings of samples from the tumor were in keeping with uterine lymphoma.

CASE REPORT

A 40 years old P2+4 Nigerian lady who initially presented on referral to our facility in June 2020 following 8 months history of recurrent bleeding per vaginam and 4 months history of progressive abdominal swelling and weight loss. At onset, bleeding was spontaneous and copious with passage of clots and associated dizziness but no loss of consciousness. Abdominal swelling started as small suprapubic growth which subsequently progressed rapidly to involve the entire abdomen with associated obstructive symptoms like constipation, oliguria, bilateral hydronephrosis on ultrasound and CT scan and significant weight-loss but no fever or night sweats. Her last confinement was about 9 years prior to presentation. There were no untoward findings in her gynecological as well as her past medical, social, and family history.

She had initially presented to the referring hospital on account of her symptoms and she had multiple blood transfusions on account of recurrent anemia during her evaluation. Abdominopelvic CT scan done revealed multiple uterine masses with ascites and suspicion of malignancy while chest CT scan was normal. She was scheduled for exploratory laparotomy and sample from the uterine mass was obtained for histology as it was adjudged unresectable. Histology report revealed sheets of neoplastic lymphocytes with peripheral chromatin distribution having irregular notched nuclear membranes and several nucleoli. Findings were in keeping with non-Hodgkin lymphoma of the high-grade large B-cell type.

Findings on examination at her initial presentation to our facility was of a chronically ill middle-aged woman with notable pallor and about 32 weeks size abdominopelvic mass which was firm in consistency, irregular, non-tender, not attached to the overlying skin, can get above but not below it. Speculum examination revealed a foul smelling exophytic mass projecting from the cervix with egress of blood into the posterior vaginal fornix. Chest X-ray done revealed no significant abnormality, viral screening (HIV, HB_sAg) were negative, tumor marker (CA-125) was not remarkable.

She was admitted, resuscitated, and received care from a multidisciplinary team of gynecologists, hematologists and medical oncologists. She had multiple blood transfusions on account of recurrent anemia. She was requested to have immunohistochemistry done on the sample from the prior surgery, but this could not be done until an industrial action disrupted clinical activities, resulting in the patient seeking care in another facility where she had total abdominal hysterectomy+bilateral salpingo-oophorectomy+omentectomy done with intra-operative findings of massive ascitis and huge mass involving the uterus, ovaries, and fallopian tubes with multiple seedlings on the bowel. Excised tissues were again sent for histology in a second and different laboratory and this was equally histologically diagnosed

diffuse large B-cell non-Hodgkin lymphoma. She however presented to our facility again at about 2 weeks post repeat surgery with rapidly progressive abdominal swelling with obstructive symptoms (constipation, oliguria, and ultrasound findings of bilateral hydronephrosis) and multi-organ dysfunction. Multiple firm abdominopelvic masses were palpated on examination. A foul smelling exophytic mass extending to the lower third of the vagina with contact bleeding was palpated on digital vaginal examination. She was readmitted and had a multidisciplinary team management. Serial renal function studies showed uremia and elevated serum creatinine which was managed by the Nephrologists. A repeat abdominopelvic ultrasound scan showed multiple intra-abdominal masses with ascites (Figure 1b, 2) and grade 3 bilateral hydronephrosis while CT scan revealed large intra-abdominal masses, bilateral hydronephrosis, multiple peritoneal nodules, periumbilical (sister Mary Joseph) nodules and left pleural effusion with lung collapse seen in (Figure 1a, 2-3). She had ultrasound guided nephrostomy tube insertion by interventional radiologists and had chest tube insertion by the cardiothoracic surgeons. She was considered for ultrasound guided abdominal paracentesis, but this could not be done as a repeat abdominopelvic ultrasound finding revealed multiple echogenic masses with loculated fluid in different pockets. She was being optimized for chemotherapy and requested to run immunohistochemical analysis of the excised sample. This was, however, not achieved as her condition deteriorated further, culminating in her demise on account of multiple organ failure.

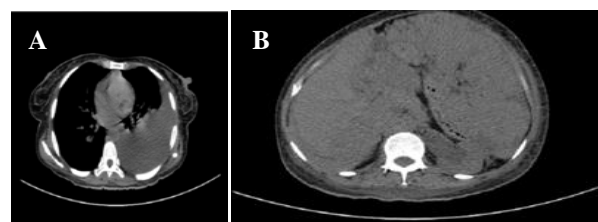


Figure 1: A) axial thoracic CT, showing the left pleural effusion with left lung collapse, B) axial abdominopelvic CT, showing perihepatic ascites and left hydronephrosis and hypovascular masses.

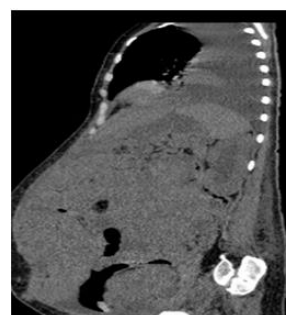


Figure 2: Sagittal section of the thoracic and abdomino-pelvic CT, showing multiple intra-abdominal masses, ascites and left pleural effusion.



Figure 3: Corona section of the post-operative thoracic and abdominopelvic CT, showing multiple intraabdominal masses and left pleural effusion.

DISCUSSION

Non-Hodgkin lymphomas are the most common lymphoproliferative disorders and has been shown to be a leading cause of cancers in Sub-Saharan Africa.⁶ Akinbami et al reported it as the third most common hematological malignancy accounting for about 14.6% of all hematological malignancies seen in a tertiary hospital in Lagos, Nigeria.⁶ It is also 2 to 3 times as common as Hodgkin's lymphoma.^{6,7} They may be classified based on the clinical grade or histologic subtype.^{1,5,8} Though there are many classification systems, the generally popular ones include the Ann Arbor classification, Harris and Sully modification and the Lugano classification, the latter two classification systems having emanated from the former.^{1,2,8,9} They are classified as "primary nodal NHL" when they arise from lymphatic tissues like the lymph nodes, spleen and thymus and classified "primary extra nodal NHL" when they arise outside the lymphatics, like the gastrointestinal tract, salivary gland, bones, thyroid, skin, liver and the genital tract.²⁻⁴ However, there are controversies in the nomenclature and, thus, the classification when there is involvement of lymphatic sites with significant extra lymphatic tumor deposits, depending on whether strict criteria or liberal criteria are used for the classification.¹⁰ Although this has significant influence on the reported incidence of the different types of NHL, primary extra nodal NHL are not as common as primary nodal lymphoma.^{3,4} In a study of 100 cases of NHL by Oluboyede et al in Ibadan, Nigeria only 3 were primary extra nodal NHL.⁷

Histologically, diffuse large B-cell non-Hodgkin lymphoma is the commonest subtype accounting for up to 42.5% of cases in developing countries as opposed to the developed countries where follicular lymphoma is the commonest findings with incidence of about 25.5%.^{2,5} Mean age at diagnosis of NHL in Nigeria is 32.3 ± 16.3 years while the median age was 29 ± 16.3 years.¹¹ Studies

from our facility, which is the immediate environment of this patient, revealed that the mean age at presentation was 38.67 ± 14.82 years while the median age was 34.50 ± 14.82 years and our patient's age of 40 years is in keeping with this finding.⁶ This is also in consonance with other studies that have shown that the median age at diagnosis is lower for females in developing countries (42.9 years) than in developed countries (48.9 years).¹²

There is a male predominance of NHL, especially in developing countries.^{6,11} However, while Perry et al reported a 57% male predominance in developing countries (vs. 51.1% in developed countries).⁵ The male predominance in developing countries has, however, been attributed to sex inequality in accessing care which disenfranchises the womenfolk.¹³

Primary genital NHL is rare, accounting for about 2% of all extra nodal NHL.² It commonly involves the ovaries and uterine cervix but involvement of the uterine corpus is very rare, with a reported incidence of about 0.5% of all extra nodal NHL.^{2,14} Also, NHL of the uterine corpus may be difficult to differentiate from other uterine neoplasms as they do not present with any pathognomonic symptoms.⁴ They may be asymptomatic in the early stages and may subsequently present with an abdominopelvic mass or abnormal uterine bleeding.³ The "B" symptoms of lymphoma, like fever, night-sweat and unexplained weight loss may be absent, posing diagnostic challenge and resulting to delay in making diagnosis.¹⁵ In current case patient had presented with recurrent bleeding of about 8 months duration which she was misconstrued for an irregular menses. She was essentially stable at the early phase of her illness, but bleeding became more pronounced, necessitating recurrent transfusions. There was also superimposed abdominal mass initially misdiagnosed as uterine fibroids. Possibility of uterine sarcoma was made on further assessment, considering the rate of tumor progression but uterine lymphoma was not suspected until after tissue diagnosis, partly because this patient had no peripheral lymphadenopathy and the only "B" symptom present was weight loss which can also be seen in uterine sarcoma and other malignancies.

Because the single most important prognostic indicator for NHL of the genital tract is the Ann Arbor stage, early diagnosis and management is necessary.¹⁶ However, it is important to have accurate evaluation and response assessment prior to commencement of definitive treatment.^{1,16} Immunohistochemistry (IHC) is important for accurate tumor diagnosis, disease classification and management. The authors recognized that a low percentage of 27.6% of lymphoma diagnosed by IHC were diagnosed correctly by Hematoxylin & Eosin (H&E) and morphology alone.^{12,17} While histology remains the first line diagnostic approach, the histological complexity of lymphoma is a drawback in making a proper diagnosis. Differentiating reactive lymphoid lesions from malignant lymphomas may be difficult

without IHC. This brings to the fore the inadequacy and inefficiency of the use of histology alone to make a diagnosis of NHL. This is an obvious limitation of this case report. However, reliance on two histology reports from different laboratories could confirm the diagnosis of non-Hodgkin's lymphoma.

Because of its rarity and lack of specific presentation, primary genital lymphomas including uterine NHL are not only difficult to diagnose but there is also no consensus on modalities of treatment.⁴ While treatment is individualized, chemotherapy±radiotherapy has been the mainstay of management and lymphomas have been shown to be chemo- and radiosensitive, limiting the role of surgery especially in advanced disease as surgery may aid tumor dissemination.⁴ This patient deteriorated clinically and presented with a bigger abdominopelvic mass and left pleural effusion barely 2 weeks following an extensive abdominopelvic surgery for her malignancy. This might have played a major role in her decline and subsequent demise.

CONCLUSION

Uterine NHL is a rare tumor with varying presentation. Fatality is influenced by the tumor stage, histologic type, and poor management. Prompt/accurate diagnosis and appropriate management are pivotal to patients' survival. It should, thus, be a differential in any patient presenting with an abdominal/pelvic mass and/or abnormal bleeding per vagina.

ACKNOWLEDGEMENTS

The authors appreciate the assistance rendered by all members of staff in the Department of Obstetrics and Gynecology and Haematology, Lagos State University Teaching Hospital, Ikeja, for participation in the patient management.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

REFERENCES

- Chesson BD, Fisher RI, Barrington SF, Cavalli F, Schwartz LH, Zucca E, et al. Recommendations for initial evaluation, staging, and response assessment of Hodgkin and non-Hodgkin lymphoma: the Lugano classification. *J Clin Oncol.* 2014;32(27):3059-68.
- Rosenberg SA. Validity of the Ann Arbor staging classification for the Non-Hodgkin's Lymphomas. *Cancer Treat Rep.* 1997;61:1023-7.
- Vang R, Medeiros J, Ha Cs, Deaver M. Non-Hodgkin's lymphoma involving the uterus: A clinicopathologic analysis of 26 cases. *Mod Pathol.* 2000;13(1):19-28.
- Krol AD, le Cessie S, Snijder S, Kluin-Nelemans JC, Kluin PM, Noordijk EM. Primary extra nodal non-Hodgkin's lymphoma (NHL): the impact of alternative definitions tested in the Comprehensive Cancer Centre West population based NHL registry. *Ann Oncol.* 2003;14(1):131-9.
- Perry AM, Diebold J, Nathwani BN, MacLennan KA, Muller-Hermelink HK, Bast M, et al. Non-Hodgkin lymphoma in the developing world :review of 4539 cases from the International Non-Hodgkin lymphoma Classification Project. *Haematological* 2016;11(10):1244-50.
- Akinbami A, Dada M, Dosunmu A, Balogun M. Adult Haemato-oncology Cases: A Six Year Review at Lagos State University Teaching Hospital Ikeja. *The Internet J Dental Sci.* 2008;7:2.
- Oluboyede OA, Olaofe WA, Esan GJ. Non Hodgkin Lymphoma in Ibadan, Nigeia. *J Natl Med Assoc.* 1977;69(7):499-502.
- Otter R, Gerrits WB, vd Sandt MM, Hermans J, Willemze R. Primary extra nodal and nodal non-Hodgkin's lymphoma. A survey of a population-based registry. *Eur J Cancer Clin Oncol.* 1989;25(8):1203-10.
- Johannesson L, Mason J, Miller J, Selva-Nayagam S, Oehler MK. Primary Non-Hodgkin's lymphomas of the uterus and uterine cervix. *Oncol Cancer Case Rep.* 2017;3:127.
- Glass AG, Karnell LH, Menck HR. The National cancer data base report on non-Hodgkin's lymphoma. *Cancer.* 1997;80(12):2311-20.
- Ugboko V,I. Oginni F.O, Adelusola K.A, Durosinmi M.A. Orofacial non-Hodgkin's lymphoma in Nigerians. *J oral Maxillofac. Surg.* 2004;62(11):1347-50.
- Akinde OR, Anunobi CC, Osunkalu OV, Phillips AA, Afolayan OM. The challenges of lymphoma diagnosis in a Tertiary Hospital in Lagos, Nigeria. *J Clin Sci.* 2016;13:58-71
- Gijsbers van Wijk CM, van Vliet KP, Kolk AM. Gender perspectives and quality of care: towards appropriate and adequate health care for women. *Soc Sci Med.* 1996;43(5):707-20.
- Frey NV, Svoboda J, Andreadis C, Tsai DE, Schuster SJ, Elstrom R, et al. Primary lymphomas of the cervix and uterus: The University of Pennsylvania's experience and a review of the literature. *Leuk Lymphoma.* 2006;47(9):1894-901.
- Anagnostopoulos A, Mouzakiti N, Ruthven S, Herod J, Kotsyfakis M. Primary cervical and uterine corpus lymphoma; a case report and literature review. *Int J Clin Exp Med.* 2013;6(4):298-306.
- Harris NL, Suly RE. Malignant lymphoma and granulocytic sarcoma of the uterus and vagina. *Cancer.* 1984;53:2530-45.
- Durotoye I. Pattern of haematological malignancies in Ilorin, Nigeria: a ten -year review. *J Hematol.* 2008;5:1-7.

18. Babatunde A, Amiwero C, Olatunji P, Durotoye I. Pattern of haematological malignancies in Ilorin, Nigeria: a ten -year review. J Hematol. 2008;5:1-7.

Cite this article as: Olalere FDH, Adeyeye AF, Kuye TO, Tijani AF, Rabi FA, Bamiro AR, et al. Uterine non-Hodgkin lymphoma: a case report and review of literatures. Int J Sci Rep 2021;7(3):175-9.