

PATTERN OF GYNAECOLOGICAL MALIGNANCIES IN JOS

Wilfred O Sanni¹, Amaka N. Ocheke², Tinuade Oyeboode², Musa Jonah², Dalyop D Nyango², Olugbenga ASilas³, Atiene S Sagay²

¹*Department of Obstetrics and Gynaecology, General Hospital, Kubwa, Abuja*

²*Department of Obstetrics and Gynaecology, Faculty of Medical Sciences, University of Jos*

³*Department of Pathology, Faculty of Medical Sciences, University of Jos*

ABSTRACT

Context: Female cancer is a public health problem the world over. The malignancies of the female genital organs are major causes of morbidity and mortality which necessitates data for policy formulation and health planning.

Objective: To document the relative frequency, age distribution and histological patterns of gynaecological malignancies seen at the Jos University Teaching Hospital (JUTH).

Methodology: A retrospective 5 year review of all gynaecological malignancies seen at the JUTH.

Main outcome measures: frequency, age distribution and histological patterns of gynaecological malignancies

Result: Female genital tract cancers account for 5.4% of gynaecological disorders in JUTH. The complete records of 203 out of 250 patients with gynaecological malignancies were retrieved giving a retrieval rate of 81.2%. Of these 203 case records, 152(74.9%) cases were from the uterine cervix while 31(15.3%) and 13(6.5%) cases were from the ovary and uterine corpus respectively. The vagina and vulva accounted for 3(1.4%) and 4(1.9%) cases respectively. Squamous cell carcinoma accounted for 93.4% of cervical cancers and 100% of vaginal and vulval cancers. Epithelial tumours accounted for 61% of ovarian tumours while choriocarcinoma accounted for 53.8% of cancers of the corpus uteri.

Conclusion: Squamous cell cervical cancer is still the most common gynaecological malignancy in Jos. The challenges of HIV/AIDS and cervical screening need to be addressed to reduce its incidence.

Keywords: Gynaecological cancers, pattern, frequency, histology, Jos

INTRODUCTION

Cancer is a public health problem the world over. The malignancies of the female genital organs are major causes of morbidity and mortality. This is particularly so in the developing countries where there is poor awareness and late presentation. Worldwide, gynaecological cancers account for about 10% of new cancer cases in women and 12% of cancer deaths¹. Developed countries have seen a

Correspondence: Ocheke, AN
Department of Obstetrics and Gynaecology
Faculty of Medical Sciences
University of Jos
Phone number: 08036135114
Email: amakaocheke@yahoo.com

decline in cervical cancer due to organized screening programmes^{1,2}. However, in sub-Saharan Africa, squamous cell carcinoma of the cervix accounts for the largest proportion of genital tract cancers³⁻⁸.

Endometrial carcinoma has become the most common female genital tract malignancy in North America and Northern Europe while it is less commonly seen amongst Nigerian women^{1,3,9}. Ovarian cancer is one of the common female genital tract malignancies with considerable geographical variation, the incidence in the highest risk countries being five times greater than that in the lowest risk countries¹⁰⁻¹². Vulval and vaginal cancers are rare with peak incidence in the 6th decade of life^{3,13-15}.

There has been limited recent information on the pattern of gynaecological cancers in Jos hence the decision to carry out this study to determine the frequency and pattern of gynaecological malignancies and if there are any significant changes from previous reports at the Jos University Teaching Hospital, Jos. This could have significant implications on health planning and policy decisions.

MATERIALS AND METHODS:

This was a retrospective descriptive study carried out at the Jos University Teaching Hospital, Jos, North Central Nigeria. The age, clinical and histological diagnoses of all consecutive patients with gynaecological malignancies managed between January, 1999 and December, 2003 were retrieved from the ward case notes, theatre records and histopathology records of the University of Jos Teaching Hospital and entered into prepared proformas.

The analysis of data was done using simple percentages.

RESULTS:

During the 5-year period under review there were 250 patients with gynaecological malignancy out of 4606 new patients seen in the gynaecological outpatient clinic giving an incidence of 5.4%. However the complete records of only 203 patients were retrieved for analysis giving a retrieval rate of 81.2%.

Relative frequencies of gynaecological malignancies: Majority of gynaecological malignancies (74.9%) were from the uterine cervix while vaginal and vulval cancers were rare (Table 1).

Age range/Mean age: The youngest age for gynaecological cancers was for ovarian cancer, choriocarcinoma and cervical cancer: 19, 20 and 23 years respectively (Table 1). The mean age at presentation was lowest for choriocarcinoma (29.7 years) while vaginal and vulval cancers had the highest mean ages of 61.7 and 65 years respectively (Table 1).

Histological pattern: The histological types of all gynaecological tumours are shown in table 2. Squamous cell carcinoma was the most common cancer of the cervix (93.4%). Choriocarcinoma accounted for the largest proportion of uterine cancers (53.8%) while epithelial tumours were the most common type of ovarian cancer (61.3%) with serous cyst adenocarcinoma accounting for the largest proportion (Table 2). All vulval and vaginal cancers were squamous cell carcinomas (Table 2).

DISCUSSION:

The main findings of the study were that gynaecological cancers account for a significant proportion (5.4%) of the gynaecological disease burden and the pattern of gynaecological cancers is similar to the report 10 years ago from the same institution with cervical cancer as the

most common malignancy.

Carcinoma of the uterine cervix accounted for 152 (74.9%) cases. This is similar to findings from other parts of Nigeria and sub-Saharan countries which showed cervical cancer to be the commonest malignancy of the female genital tract with squamous cell carcinoma accounting for 85-90% of primary cervical neoplasia^{1,4,5,7,8,14-16}. This is due primarily to the limited availability and poor uptake of cervical screening facilities prevalent in most developing countries^{17,18}. The mean age of cervical cancer was 39.5 years which was lower than 49 to 55 years reported from other parts of Nigeria and sub-Saharan Africa^{4,5,7,8}. It is also lower than the mean age of 50 years reported 10 years ago from our institution⁶. This may be largely due to the increased presence of HIV seropositivity which has been found to increase the incidence of cervical cancer and at a younger age¹⁹.

Ovarian cancer was the second commonest malignancy in our study, accounting for 15.3% of gynaecological malignancies which is similar to 16.3% in Maiduguri differs from 24% and 26.3% reported from Nnewi and Kano^{1,16,20}. It was also the second most common gynaecological malignancy from these centres^{1,16,20}. The commonest ovarian cancer in our study was the epithelial type of which serous cystadenocarcinoma was the commonest variety. This is similar to findings from other centres in Nigeria^{1,16,20,21}. Ovarian cancer is more common in the industrialized than in the non-industrialized world. The highest reported incidence rates are from Sweden, Norway and other affluent countries, whereas the lowest are from Japan and other Asian countries³. The observed decreased risk with increasing parity

and breast-feeding may explain the lower incidence of ovarian cancer in our women²².

Choriocarcinoma represents 53.8% of all tumours of the uterine corpus similar to 54.1% reported in Maiduguri¹⁴. However, it constitutes only 3.45% of all gynaecological malignancies in this study which is similar to previous reports and other centres in Nigeria^{6,14,15}. It was found to have an age range of 20-40 years (mean 29.7 years) because it is a disease that occurs in women of reproductive age. However, endometrial cancer and other malignant lesions of the corpus uteri were less commonly seen, a fact that may be related to the level of socio-economic development in the society. In epidemiological terms, it is widely accepted that cancer of the corpus uteri is a disease of affluent societies, with incidence rates closely correlating with a nation's gross domestic product²³.

Vaginal and vulval tumours are generally rare as documented in this study where they constituted 1.4 % and 1.9% of tumours. Similar findings have been reported from Ghana, Malawi and other centres in Nigeria^{4,5,16,24}. All vaginal and vulval tumours were of squamous cell origin which correlates previous reports from Jos and findings from other studies^{1,6,16,24}.

The limitations of the study was that it was retrospective with the problems associated with such studies especially difficulty in obtaining all the required data. It is also a hospital based study and may not be a true representation of the general population. However, with the problems of poor record keeping and poor hospital utilization, the information from the study is necessary for policy and health planning and also forms a basis for further research.

Gynaecological malignancies contribute

a significant portion to the gynaecological disease burden in JUTH and the pattern of these malignancies is similar to the previous reports from our hospital with cervical cancer accounting for a vast majority of cases. This is probably an indication that the problems of cervical screening has not yet been addressed and the emergence of HIV/AIDS has worsened the problems of cervical cancer in our environment. There is therefore the need for better organization of cervical screening programmes. There is also need for proper record keeping with the strengthening of the cancer registry system so that the magnitude of the problem of cancers can be better appreciated and resources better allocated to tackle the challenges of cancer in Nigeria while strengthening the primary healthcare centres so that community based awareness, screening and research can be properly done.

Table 1: Site of gynaecological tumour and age (years) at presentation

Site	Number of patients	Percentage (%)	Age range (years)	Mean age (years)
Cervix	152	74.9	23-80	39.5
Ovary	31	15.3	19-78	41
Uterus	13	6.5	20-70	40.1
	(7)	(3.45)	(20-40)	(29.7)
Choriocarcinoma	(6)	(2.95)	(40-70)	(50.5)
Others				
Vulva	4	1.9	65-75	65.0
Vagina	3	1.4	55-70	61.7
Total	203	100		

Table 2: Site and histological pattern of gynaecological malignancies

Histological type	Number of patients	Percentage (%)
Cervix		
Squamous cell carcinoma	142	93.4
Adenocarcinoma	7	4.6
Adenosquamous carcinoma	3	2
Total	152	100
Corpus Uteri		
Choriocarcinoma	7	53.8
Adenocarcinoma	5	38.5
Leiomyosarcoma	1	7.7
Total	13	100
Ovary		
Epithelial tumours		
Serous cystadenocarcinoma	12	38.7
Mucinous cystadenocarcinoma	4	12.9
Clear cell tumour	2	6.4
Endometrioid tumour	1	3.2
Germ cell tumours		
Dysgerminoma	3	9.7
Endometrial sinus tumour	2	6.4
Immature teratoma	1	3.2
Mature cystic teratoma with malignant transformation	1	3.2
Mature cystic teratoma with malignant transformation	1	3.2
Sex cord stromal tumours		
Malignant granulosa cell tumour	3	9.7
Arrhenoblastoma	1	3.2
Unclassified	1	3.2
Total	31	100
Vagina		
Squamous cell carcinoma	3	100
Vulva		
Squamous cell carcinoma	4	100

REFERENCES:

1. Kyari O, Nggada H, Mairiga A. Malignant tumours of female genital tract in North Eastern Nigeria. *East Afr. M. J.* 2004; 81: 142-145
2. Sharma A, Fox R. Hereditary cancer syndromes in gynaecology: An opportunity for prevention. *Progress in obstetrics and gynaecology*, volume 14. Edinburgh: Churchill Livingstone, 2000; 311-332.

3. Cancer incidence in five continents, Volume VII, 1997. Editors: Parkin D.M., Whelan S.L., Ferlay J., Raymond L., Young J. (IARC Sc. Publication No. 143, Lyon, France).
4. Nkyekyer K. Pattern of gynaecological cancers in Ghana. *East Afr. M. J.* 2000; 77: 534-538.
5. Taulo F, Malunga E, Ngwira A. Audit of gynaecological cancers in Queen Elizabeth Central Hospital, Blantyre. *Malawi Med J.* 2008; 20: 140-142.
6. Mandong BM, Ujah IAO. A ten-year review of gynaecological malignancies in Jos University Teaching Hospital, Jos, Nigeria (1990-1999). *Sahel Medical Journal.* 2003; 6: 49-52.
7. Umeora OU, Onuh SO. Cancer of the cervix at the University of Benin Teaching Hospital (UBTH), Benin City, Nigeria, in the last decade of the millennium. *Orient Journal of Medicine.* 2007; 19: 24-30
8. Ijaiya MA, Aboyeji PA, Buhari MO. Cancer of the cervix in Ilorin, Nigeria. *West Afr J Med.* 2004; 23: 319-322
9. Anciaux D, Lawrence WD malignant uteri tumours In: *Gynaecological malignancies: current Diagnosis and treatment* New York, W.B Saunders, 1996; 130-145.
10. Monaghan J.M. Malignant disease of the ovary. In: *Dewhursts textbook of Obstetrics and Gynaecology.* K (Edmond ed) Blackwell sciences (pub). 1999: 572-581.
11. Yancik R. Ovarian cancer: Age contrast in incidence, histology, disease stage at diagnosis, and mortality *Cancer,* 1993, 71: 517-523.
12. Muir C, Waterhouse J, Mark T, Powell J, Whelan S. Cancer incidence in five countries. Volume 5. Lyon: International Agency for Research on cancer (IARC) scientific publications 1987; No 88.
13. Cronje H.S Epidemiology of gynaecological malignancies. In; *Manual of practical Gynaecological oncology.* Basil Bloch, Katrien Dehaeck and Robert Soeters (ed) Chapman and Hall (pub) 1st edition 1995:1-13.
14. Pindiga U.H, El-Nafaty AU, Ekanem I.A. Female genital malignancies in Maiduguri, Nigeria A Review of 328 cases. *Trop J. Obstet Gynaecol.* Vol. 16 No. 1 1999 52-56.
15. Ekanem I.A, Ekpo M.D; Perera P.A.C, Khalil M.I and Attah E.D.B Female genital malignancies in southeastern Nigeria: Ten-year histological analysis with special emphasis on cervical cancer. In Mere N. Kisseka (Ed) *Women's Health issues in Nigeria,* chapter 5 Tanaza publishing col. Ltd Zaria 1992: 39-49.
16. Galadanci HS, Mohammed AZ, Uzoko CC, Jido TA, Ochicha O. Gynaecological malignancies seen in a tertiary health facility in Kano, Northern Nigeria, *Trop J. Obstet Gynaecol,* 2003; 20: 105-108.
17. Obiechina NJ, Mbamara SU. Knowledge attitude and practice of cervical cancer screening among sexually active women in Onitsha, southeast Nigeria. *Niger J Med.* 2009; 18: 384-387.
18. Gharoro EP, Ikeanyi EN. An appraisal of the level of awareness and utilization of the Pap smear as a cervical cancer screening test among female health workers in a tertiary health institution. *Int J Gynecol Cancer.* 2006; 16:1063-1068.
19. Igwegbe AO, Ugboaja JO. Clinicopathological analysis of primary ovarian cancers in a tertiary health facility in Nnewi, South Eastern Nigeria. *Nigerian*

- Medical Practitioner. 2010; 57: 27-30.
20. Dim CC, Dim NR, Ezegwui HU, Ikeme AC. An unmet cancer screening need of HIV-positive women in southeastern Nigeria. Int J Gynecol Cancer. 2006;16:1063-1068.
 21. Obed J.Y Khalil M.I.A and Ekanem E.D Histological types of ovarian tumours as seen in African teaching hospital in North Eastern Nigeria *J. Obst Gynae* 1999, 19 (5): 526-528.
 22. Doyle P, dos Santos I. Pathogenesis and epidemiology of ovarian cancer. In: Shingleton HM, Fowler WC, Jordan JA, Lawrence WD (eds.) *Gynaecological Oncology: current diagnosis and treatment.* Philadelphia; WB Saunders Company Ltd. 1996; 163-165.
 23. Parazzini F, La Vecchia C, Bocciolone L, Franceschi S. the epidemiology of endometrial cancer *Gynaecol Oncol*, 1991; 41:1-16.
 24. Seleye-Fubara D, Uzoigwe S, Akani CI. Pathology of vaginal cancers in Port Harcourt, Nigeria: A 14-year study of 15 cases. *Niger J Clin Pract.* 2007; 10: 330-334.