A review of the prevalence and pattern of presentation of gynaecological cancers in a tertiary hospital in Nnewi, South-East Nigeria

Original Article
Gerald O UDIGWE
Osita S UMEONONIHU
Ikechukwu I MBACHU

Department of Obstetrics and Gynaecology
Nnamdi Azikiwe University Teaching Hospital Nnewi
Anambra State, Nigeria

Author for Correspondence
Dr Gerald O Udigwe
PO Box 643 Nnewi
Anambra State, Nigeria

E-mail:
geraldudigwe@yahoo.com

Received: May 3rd, 2011
Accepted for Publication: September 30th, 2011

ABSTRACT

Background: Although the battle against infections and communicable diseases is still ongoing, malignancies are increasingly becoming a health burden especially in gynaecological practice due to the late presentation of cancer patients. When these patients present with advanced forms of disease, medical personnel are often handicapped as they can only offer palliative treatment.
Aim / Objective: To conduct a preliminary review (pilot study) of gynaecological cancers in our centre preparatory to the establishment of a Gynaecological Oncology unit.
Method: This is a retrospective review of gynaecological cancers in our centre over a three-year period using information from patients' folders, and theatre and admission registers.
Results: Out of a total of 1849 new gynaecological patients, 57(3.1%) were malignancies, representing 10.8% of all gynaecological admissions. Cervical cancer (61.4%) remains the most common cancer, while cancers of the fallopian tube and vulva (1.8%) are the least common. About 80% of the patients either had only primary or no formal education. The mean onset-to-presentation interval for symptoms ranged from 130days for cervical cancer to 336days for endometrial cancer.
Conclusion: Cervical cancer, though largely preventable, remains the most common gynaecological cancer in our environment with a strong linkage to illiteracy.

Keywords: *Cancers, gynaecological, Nnewi, pattern*

INTRODUCTION

The burden of gynaecological malignancies in developing countries cannot be over-emphasised. This is due to the late presentation in advanced stages of the disease and lack of facilities, such as radiotherapy, for the management of such cases.[1] Late presentation, in turn, is due to low level of literacy, ignorance and poverty. It is not uncommon to see patients with terminal cancers presenting to hospital clinics when only little palliative care can be offered.

The pattern and prevalence of these genital tract malignancies show wide geographic variations with several studies reporting varying patterns of prevalence and presentation between developing and developed countries.[2,3] Within some countries, there are also differences in prevalence and pattern between urban and rural areas.[3,4] This may not be unconnected with the natural history of cancer which is dependent on the genetic, microbiologic, physical and social environments of the patient. Other factors include the patient's immune system, diet, co-morbidities and sometimes, socio-cultural practices.[2,5]

Also, the differences in availability and access to education, diagnosis, management and treatment facilities, may affect the prevalence and pattern of presentation of the cancers. Furthermore, the biosocial indices of the population such as the mean age for child bearing, mean parity, sexual habits, religion and occupation may well affect the prevalence and pattern of presentation of gynaecological malignancies in any population.

For those cancers that are largely preventable like carcinoma of the cervix, the availability and uptake for screening services is very poor. Factors identified as responsible include low literacy level, poverty, ignorance, lack of equipment and dearth of trained medical personnel.[6] Studies in our environment have shown that even in the medical community, there is very poor uptake of screening services.[7] This situation, invariably, leads to late presentation and late diagnosis of the disease.

As part of an expansion program in the Department of Gynaecology in our hospital, a Gynaecological Oncology unit is being established. The need then arose to conduct a preliminary or pilot study to assess the situation on the ground preparatory to full scale introduction of gynaecological oncology services.

In view of the foregoing, we decided to evaluate the prevalence and pattern of presentation of gynaecological malignancies in our hospital with a view to ascertaining areas of emphasis with regards to preventive and curative measures. We will also determine the prevalence and relationship, if any, between the level of education, age and parity and the onset-presentation time.

METHODS

This is a retrospective descriptive study carried out in the Gynaecology Department of Nnamdi Azikiwe University Teaching Hospital (NAUTH) Nnewi, Anambra State, South-East Nigeria. After obtaining ethical clearance, the outpatient, admission and theatre registers were searched to identify the folder number of patients with gynaecological cancers within the study period (January 1st, 2006 to December 31st, 2008 inclusive).

The number of new gynaecological patients and gynaecological admissions for the same period were also noted. The identified folders were subsequently retrieved from the Medical Records Department, and the records were scrutinized to match the patient's name and folder numbers to avoid double recruitment. Data on the patient's age, parity, educational level, time from onset of symptoms to presentation and final diagnosis (histological) were extracted and entered into a data sheet for analysis. The SPSS version 16.0 IL USA was used for the analysis. The results were expressed in tables as frequencies and means.

RESULTS

A total of 1849 new gynaecological out-patients were seen while 528 gynaecological patients were admitted over the period. Fifty-seven patients had various types of gynaecological malignancies, accounting for 3.1% of gynaecological out-patients and 10.8% of gynaecological admissions in the hospital. The mean age for all the gynaecological malignancies was 52.4±15.2 years; mean ages of the various malignancies are shown in table 1.

Table 1. Frequency, mean age, parity and number of days between symptom and presentation

Type of Cancer (histological)	Frequency (%)	Mean Age (yrs)	Mean Parity	Mean Days symptom to presentation
Cervix	35 (61.4)	54.9	6.5	130.8
Ovary	15 (26.3)	44.8	3.5	132.6
Endometrium	5 (8.8)	55.6	5.2	336.6
Vulva	1 (1.8)	80.0	10.0	224.0
Fallopian tube	1 (1,8)	32.0	2.0	252.0
Total	57 (100.0)	52.4	5.4	153.1

Thirty-five patients (61.4%) had cervical cancer, 15(26.3%) had ovarian cancer, 5(8.8%) had endometrial cancer, while 1(1.8%) patient each had vulvar and fallopian tube cancers, respectively. Twenty-eight (80%) of the cervical cancer patients, 10(66.7%) of the ovarian cancer patients, 4(80%) of the endometrial cancer patients and the single vulvar cancer patient had either primary or no formal education as their highest educational attainment (Table 2).

The mean onset – presentation time (in days) was 130.8 for cervical cancer, 132.6 for ovarian cancer, 336.6 for endometrial cancer, 224.0 for the vulva cancer and 252.0 for the fallopian tube cancer (Table 1).

Table 2. Biosocial characteristics of the gynaecological cancer patients

Variable	Ca Cervix	Ca Ovary	Ca Endom-etrium	Ca Vulva	Ca Fallopian tube
Age					
<20	0.00	1.0	-	-	0.0
20- 29	1.0	2.0	-	-	0.0
30- 39	3.0	2.0	1.0	-	1.0
40-49	8.0	3.0	1.0	-	-
50-59	130	2.0	0.0	-	-
60-69	6.0	4.0	2.0	-	-
≥70	4.0	1.0	1.0	1.0	-
Educational status					
Tertiary	2.0	4.0	-	-	1.0
Secondary	5.0	1.0	1.0	-	-
Primary	14.0	4.0	4.0	-	-
None	14.0	6.0	5.0	1.0	-
Religion					
Traditional /Atheist	1.0	2.0	-	-	-
Christianity	34.0	13.0	6.0	1.0	1.0
Islam	0.0	-	-	-	-

DISCUSSION

The 57 cases of gynaecological (female genital tract) malignancies constituted 3.1% of gynaecological outpatients and 10.2% of gynaecological admissions for the study period. This connotes a high disease burden with pressure on bed spaces as these patients tend to stay long in the hospital. It contrasts with the 72 out of 1706 (4.2%) gynaecological admissions by Briggs in Port-Harcourt, South-South Nigeria. [8]

The frequency of the various cancers shows that cervical cancer was the most frequent in our environment and accounted for 35(61.4%) of the cases, followed by ovarian 15(26.3%), endometrial 5 (8.8%) and 1(1.8%) each of vulvar and fallopian tube cancers. These findings were similar to those of Galadanci and Mandong in Kano, North-West and Jos, North-Central Nigeria.[9,10] They are also similar to the findings of Nkyekyer in Ghana, West Africa and Taulo in Malawi, Southern Africa.[11,12] It nevertheless contrasts with those of Shahid Jamal *et al* in Pakistan where the most frequent gynaecological cancer was ovarian rather than cervical cancer, with the former constituting 42.4% of all gynaecological malignancies.[2] This is in keeping with a widely held view that cancer patterns and prevalence have geographical and socio-economic variations.

The dominance of cervical cancer is in contrast to what obtains in western countries where endometrial cancer is more common, and this is thought to be due to the well-established screening services for cervical cancer.[13-15] Of note is the one case of fallopian tube cancer (1.8%) found in our centre which was lacking in other reports reviewed in our environment.[8,16] Furthermore, the other rare female genital cancer (vulvar 1.8%), took an almost similar pattern to that in other studies from the environment. There was no case of vaginal cancer in our centre in the period under review.

The mean age of gynaecological cancers was 52.4 years, while the mean parity was 5.4 (Table 1). Excluding the single cases of vulvar

and fallopian tube cancer respectively, patients with ovarian cancers presented at the youngest mean age of 44.8years. The significance of this cannot be determined due to the small sample size studied. The mean age and parity for cervical cancer was 54.9years and 6.5, respectively, and also, apart from the case of vulvar carcinoma, the highest mean parity was for carcinoma of the cervix. This is in keeping with mainstream knowledge that it is a disease of the sexually active/parous women, with two peak ages (4th and 6th decades).[17] Of special concern is endometrial cancer with a mean age and parity of 55.6 years and 5.2, respectively. This is in contrast to the current belief that it is a disease of the 7th decade and nulliparous, but is similar to the finding (56.0 years) of Nkyekyer in Ghana, West Africa.[18,19,11]

It is evident from this study that, on the average, gynaecological cancers are diseases of the 6th decade. The educational status of the patients showed that twenty-eight (80%) of cervical cancer patients, 10 (66.7%) of the ovarian cancer patients, 4 (80%) of the endometrial cancer patients and the single vulvar cancer patient, had either primary or no formal education as their highest educational attainment. This suggests that low socio-economic status may be a factor for the development of gynaecological cancers. More importantly, education affects the care-seeking behaviour of patients and the lack of it in most of our patients may well be the explanation for their late presentation. Lack of education also influences economic power which may in turn delay presentation in a society where health insurance is not yet widely available.

The mean duration of symptom onset-to-presentation for gynaecological cancers (Table 1) is 153.1days (5months). This is worrisome because most of the patients get to the hospital with advanced disease leaving the gynaecological oncologist with no choice other than palliative care. Of note in this series is the onset of symptom-to-presentation time for endometrial cancer which at 336.6days (11.2months) was the longest. This is in contrast to the findings of Briggs and Nkyekyer that endometrial cancer patients present early.[8,11] A closer scrutiny of our data shows that 3 of the women presented to the hospital after 6months, 1year and 2years, respectively. This was after they had visited several spiritual healing homes, native doctors and other unorthodox healers. Furthermore, 80% of the patients with endometrial cancer had either primary or no formal education and this may partly be responsible for their poor healthcare-seeking behaviour.

CONCLUSION

Gynaecological cancers, especially carcinoma of the cervix, constitute a significant proportion of the gynaecological outpatient and admission loads in our hospital and environment. Whereas the pattern of presentation is similar in developing countries, it differs from findings in developed countries, and the most common gynaecological cancer remains carcinoma of the cervix which is largely preventable. It is very important to strengthen screening services for early detection of disease so as to reduce the burden on the health sector and community. There is also a strong need to establish a dedicated Oncology unit with radiotherapy services to deal with advanced forms of cancers.

REFERENCES

1. Udigwe GO, Ogabido C. Clinico-pathological study of cervical carcinoma in SouthEastern Nigeria: A five-year retrospective study. *Niger J Clin Pract* 2007; 11(3):202–205.
2. Jamal S, Mamoon N, Mushtaq S, Luqman M, Moghal S. The pattern of gynecological malignancies in 968 cases

from Pakistan. *Ann Saudi Med* 2006; 26(5):382-384.
3. Dey S, Hablas A, Seifeldin I, Soliman A. Urban-rural differences of gynaecological malignancies in Egypt (1999-2002). *Br J Obstet Gynaecol* 2010; 117(3):348-355.
4. Minelli L, Stracci F, Prandini S, Moffa IF, La Rosa F. Gynaecological cancers in Umbria (Italy): trends of incidence, mortality and survival. *Eur J Obstet Gynaecol Reprod Biol* 2004; 115(1):59-65.
5. Basile S, Angioli R, Manci N, Palaia I, Plotti F, Benedetti Panici P. Gynecological cancers in developing countries: the challenge of chemotherapy in low-resources setting. *Int J Gynecol Cancer* 2006; 16(4):1491–1497.
6. Adesina OA, Babarinsa IA, Fawole OA, Oladokun A, Adeniji AR, Adewole IF. Cervical cytology services in Nigeria: Providers perspective. *J Obstet Gynaecol* 2003; 23(4):416-418.
7. Udigwe GO. Knowledge, attitude and practice of cervical cancer screening (PAP smear) among female nurses in Nnewi, South Eastern Nigeria. *Niger J Clin Pract* 2006; 9(1):40–43.
8. Briggs ND, Katchy KC. Pattern of gynaecological malignancies as seen in a tertiary hospital situated in the Rivers State of Nigeria. *Int J Gynaecol Obstet* 1990; 31(2):157-161.
9. Galadanci HS, Mohammed AZ, Uzoho CC, Jido TA, Ochicha O. Gynaecological malignancies seen in a tertiary health facility in Kano, Northern Nigeria. *Trop J Obstet Gynaecol* 2003; 20(2):105-108.
10. Mandong BM, Ujah IAO. A ten-year review of gynaecological malignancies in Jos University Teaching Hospital Jos, Nigeria (1990-1999). *Sahel Med J* 2003; 54:49-52.
11. Nkyeker K. Pattern of gynaecological cancers in Ghana. *East Afr Med J* 2000; 77(10):534-538.
12. Taulo F, Malunga E, Ngwira A. Audit of gynaecological cancers: Queen Elizabeth Central Hospital Blantyre, *Malawi. Med J* 2008; 20(4):140-142.
13. Lindemann K, Eskild A, Vatten LJ, Bray F. Endometrial cancer, incidence, trends in Norway during 1953–2007 and predictions for 2008–2027. *Int J Cancer* 2010; 127(11): 2661–2668.
14. Beiki O, Allebeck P, Nordqvist T, Moradi T. Cervical and ovarian cancers among immigrants in Sweden: importance of age at migration and duration of residence. *Eur J Cancer* 2009; 45(1):107–108.
15. Purdie DM, Green AC. Epidemiology of endometrial cancer. *Best Pract Res Clin Obstet Gynaecol* 2001; 15(3):341–354.
16. Bassey EA, Ekpo MD, Abasatai A. Female genital tract malignancies in Uyo, South-South Nigeria. *Niger Post Med J* 2007; 14(2):134–136.
17. Okpere E. Gynaecological oncology: malignant lesions of the cervix. *In:* Okpere E (Ed). Clinical Gynaecology, Revised Edition. Mindex Publishers Benin, Nigeria 2007:145-208.
18. Dorigo O, Goodman A. Premalignant and malignant disorders of the uterine corpus. *In:* DeCherney AH, Nathan L, Goodwin TM, Laufer N (Eds). Current Diagnosis and Treatment; Obstetrics and Gynaecology, 10th Ed. McGraw-Hill, New York, USA2007: 855-870.
19. Agboola A. Tumours of the corpus uteri. *In:* Agboola A (Ed).Textbook of Obstetrics and Gynaecology for Medical Students, 2nd Ed. Heinemann Educational Books Nigeria 2006: 183-196.