Original Article

Frequency and Pattern of Gynecological Cancers in Federal Teaching Hospital, Abakaliki, Nigeria

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ABSTRACT

Background: Gynecological cancers are common and are among the leading causes of cancer-related deaths worldwide. **Aim:** The objective of this study was to determine the pattern and relative frequencies of gynecological cancers as seen at the Federal Teaching Hospital, Abakaliki, Nigeria. **Materials and Methods:** A 2-year retrospective study of female genital tract malignancies was conducted at the Federal Teaching Hospital, Abakaliki. The case notes of patients admitted for female genital tract malignancy between January 1, 2012 and December 31, 2013 were retrieved from the ward admissions and discharge books and the operating theater record books. The data were analyzed using Statistical Package for Social Science (SPSS), IBM SPSS statistics Version 20, IBM incorporation and licensors 1989,2011 New York USA and the results expressed in descriptive statistics by simple percentages. **Result:** A total of 1,178 women were seen during the study period, while 99 were found to have gynecological malignancy. The proportion of gynecological malignancies was 8.4%. Majority of the patients were in the 5th and 6th decades of life, most (60.6%) had cervical cancer, followed by ovarian cancer (19.2%), endometrial cancer (10.1%) vulva cancer (7.1%), and the least was choriocarcinoma (3.0%). Tumors of fallopian tube and vagina were not seen during the study period. Majority of the patients presented late and the common presentation was vaginal bleeding. **Conclusion:** Despite the preventable nature of cancer of cervix, it remained the most common female genital tract malignancy in Abakaliki, southeast Nigeria. Education and public enlightenment on the importance of routine screening and treatment of premalignant lesions of the cervix are necessary tools to reduce the incidence and mortality of cervical cancer.

KEY WORDS: Abakaliki, cancer, frequency, gynecologic, gynecological cancer, Nigeria, pattern

INTRODUCTION

Gynecological cancers are among the leading causes of cancer-related deaths worldwide and the distribution and frequency vary from one region to the other. It accounts for about 10% of all cancers diagnosed in women.[1] The proportion of female genital cancersrange from31.6 to 35.0% in sub-Saharan Africa and12.7 to 13.4% in North America.[2] Cervical cancer is the most common pelvic malignancy among women worldwide.[3,4] In developed countries, the introduction of routine screening and treatment for premalignant lesions of the cervix has led to a dramatic fall in the incidence and mortality of cervical cancer over the past 5 decades.[2] In developing countries like Nigeria, routine cervical cancer screening is rudimentary; hence there is a high rate of cervical cancer.[5] In developed countries, endometrial carcinoma is the commonest gynecological cancer; while in African countries, carcinoma of the cervix has been reported in many series to be the commonest, with most of the patients presenting in late stages of the disease.[2,6-8]

Ovarian cancer is the second common female genital cancers and a major cause of death from female genital tract malignancies. About 75% of the patients with ovarian cancer present with advanced stages of the disease due to nonspecific symptoms of the disease.[9] It accounted for 16.3% of the cancers in a study done in Ibadan, Nigeria.[5] In the United Kingdom, it is now the most common malignant tumor.[10]

Age and parity affect the incidence of gynecological cancers. Endometrial and ovarian cancers occur mainly later in reproductive life, while carcinoma of the cervix and choriocarcinoma are seen commonly in pre-or perimenopausal women.[11] With regards to parity, women of high parity have relatively low risk of developing

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endometrial cancer and ovarian cancer; it is known that pregnancy is protective against ovarian cancer, while multiparity is associated with increased risk of development of cervical carcinoma.[12]

This paper seeks to establish a database with regards to the pattern and relative frequencies of gynecological cancers in Ebonyi State. This database will be helpful in combating gynecological cancer menace through actions like health education, screening programs, and appropriate resource allocation.

MATERIALS AND METHODS

The study covered a period of 2 years from 1st January 2012 to 31st December 2013. The case records of all patients admitted into the gynecological ward with suspected gynecological cancer were retrieved from the medical records department. The information on clinical, surgical, and histopathological diagnosis was collated using a proforma. In addition; the type of cancer, age, and parity were noted. Most of the patients had histological diagnosis of gynecological cancers. The cases of choriocarcinoma were diagnosed on clinical features and confirmed by biochemical tests. The data were analyzed using IBM Statistical Package for Social Sciences (SPSS) statistics software version 20 (Chicago Illinois, USA), Chi-square (χ^2) test was employed to examine the significant association between variables where applicable. Statistical significance was set at 0.05.

Ethical approval for the study was obtained from the ethics and research review committee of Federal Teaching Hospital, Abakaliki

Calculation of sample size and sampling method

The prevalence rate of 10.1% was chosen to calculate the minimum sample size for this study based on the prevalence rates of 10.1% reported in Enugu,[6] which has similar sociocultural and demographic characteristics and no such studies have been done in Ebonyi state.

The required sample size for this study was calculated using the following formula:

$n = Z^2 P (1 - P)/d^2$

n = the minimum sample size required

Z = the proportion of normal distribution corresponding to the required significance level (5%) which is 1.96

P = the proportion of human immunodeficiency virus (HIV)-infected women with abnormal cervical cytology (10.1%)

d = the relative precision or tolerable error of the estimate from the study which is 5%. He estimate from this study is desired to be within 5% of the actual prevalence with 95% confidence level (5% significance level).

Thus the estimated minimum sample size was 139, but we examined a total of 1,178 case records.

RESULT

During the study period; 1,178 women were admitted into the gynecological ward and 99had gynecological cancer. Thus, 8.4% of the admissions were for gynecological cancers.

Age distribution [Table 1]

The mean age was 54(4) years. The largest numbers of gynecological cancers occurred in the 5th–6th decades of life; 53.6% of the cancers occurred in these age groups. The commonest gynecological cancers in women under 30 years of age were cervical cancer and choriocarcinoma; none had ovarian, endometrial, and vulva cancers. Cervical carcinoma rose sharply in occurrence from the 4thdecade oflife, and remained the commonest cancer in all age groups. The age group of women with the highest number of cervical carcinoma was 50–59, while that of those with ovarian cancer was 60–69 age group. None of the women aged 60 years and above had choriocarcinoma [Table 1]. The age in this study was strongly associated with development of gynecological cancer.

Relative frequencies of gynecological cancers [Table 2]

The commonest gynecological cancer in the study was cervical carcinoma, which constituted almost 60.6% of the cases followed by ovarian cancer (19.2%) and endometrial cancer (10.1%). Vulva cancer accounted for7%, while the least was choriocarcinoma (3%) [Table 2]. Vaginal cancer and leiomyosarcoma were not seen.

Parity distribution [Table 3]

The highest parity was in women with cervical cancer and the lowest in those with ovarian cancer. Endometrial and vulva cancers were also seen among the parous women, while choriocarcinoma were among women of low parity [Table 3].

DISCUSSION

In this study, gynecological cancers account for 8.4% of gynecological admissions. This is high compared to 4.18–4.7% reported in Port Harcourt and Zaria in Nigeria[6,13] and 2.8% reported in Ghana.[14] The largest numbers of gynecological cancers occurred in the 40–69 year group and is comparable to reports from Enugu and Port Harcourt.[6,15] Cervical cancers accounted for majority of the female genital

Table 1: Age distribution of gynecological cancers

Age	Cervical	Ovarian	Endometrial	Choriocarcinoma	Vulva	Total (%)	*P*
20-29	1			1		2 (2)	
30-39	4	1			1	6 (6.1)	<0.01
40-49	16	4		1		21 (21.2)	
50-59	20	1	3	1	2	27 (27.3)	
60-69	12	9	4		1	26 (26.3)	
70-79	6	4	2		2	14 (14.1)	
80-89	1		1		1	3 (3)	

Table 2: Relative frequencies of gynecological cancers

Type ofcancer	*N* (%)
Cervix	60 (60.6)
Ovary	19 (19.2)
Endometrial	10 (10.1)
Vulva	7 (7.1)
Choriocarcinoma	3 (3)
Total	99 (100)

Table 3: Parity distribution of gynecological cancers

Type of cancer	Para 0	Para 1	Para 2-4	Para 5 and above	Total	*P*
Cervical	2	1	23	34	60	
Ovarian	11	2	4	2	19	
Endometrial	1	3	2	4	10	0.001
Vulva	0	1	3	3	7	
Choriocarcinoma	0	2	1	0	3	
Total	14	9	33	43	99	

cancers in this study 60.6%. This is consistent with results from a similar study in Enugu, Port Harcourtin Nigeria and Nkyekyer from Ghana.[6,14,15]

Cervical cancer is one of the leading cancers in women worldwide; 80% of new cases occur in developing countries.[16] Cervical cancers accounted for majority of the female genital cancers in this study. This is consistent with results from a similar study in Ibadan,[5] Port Harcourt,[6] Nigeria, and Ghana.[14] The proportion of cervical cancer (60.6%) in this study is higher than 48.6% in Kano[17] and 57.8% reported in Ghana[14] and comparable to66.3% in Enugu[15] and 65% in Port Harcourt.[6] This study revealed an increasing incidence of carcinoma of the cervix in our center. This is quite understandable with early marriage and high number of livebirth in our region and absence of a national cervical cancer screening programin Nigeria and only sporadic screening of women who come for gynecological consultation in the hospital, cervical carcinoma is bound to be high. Routine cervical screening and early detection of cervical dysplasiain our center will lead to this low proportion of cervical cancer.

Ovarian cancer is the second most common female genital cancer. In this study, it accounts for 19.2% of the cases. This is low compared to the report from Enugu (21.1%),[15] 12.3% from Port Harcourt,[6] 30.5% in Kano,[17] and 25.3% in Ghana.[14] The low incidence of ovarian cancer may be associated with early marriage and high family sizes of most families as pregnancy and breast feeding are known to protect against ovarian cancers.

In this study, endometrial carcinoma accounted for 10.1% of gynecological cancers. It ismore common than choriocarcinoma which accounted for 3%, this is consistent with the findings of Nkyekyer in Ghana[14] and Kyari *et al.*, in Maiduguri.[18] In Ibadan, Nigeria, choriocarcinoma was found to be the second most common malignant tumor of female genital tract.[5] Choriocarcinoma is relatively a disease of younger women as shown in this study. This is not surprising since, being a disease associated with pregnancy, it is more likely to occur in active reproductive life.

The incidence of vulval carcinoma in this study was 7.1%, which is similar to a study done in Maiduguri[18] and higher than 1.5% reported in Uyo[19] and 3.6% in Enugu.[15]

The data presented in this study may not be a representative of community prevalence rates. Another limitation of this study was lack of follow-up and poor documentation of vital information. Data were scanty on management outcome and records of deaths from these gynecological malignancies.

CONCLUSION

From our study we conclude that cervix carcinoma is the most common female genital tract malignancy in Ebonyi, southeast Nigeria, followed by ovarian carcinoma. The importance of education and public enlightenment on routine screening and treatment of premalignant lesions of female genital tract malignancies cannot be overemphasized. Hospital facilities for screening and regular gynecological examinations and well-defined follow-up surveillance system can change disease morbidity and mortality.

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