

## Pattern of Gynaecological Cancers in University of Nigeria Teaching Hospital, Enugu, South Eastern Nigeria

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### ABSTRACT

**BACKGROUND:** Gynaecological cancers are among the leading causes of cancer related deaths worldwide. The objective of this study was to determine the pattern and relative frequencies of gynecological cancers as seen at the University of Nigeria Teaching Hospital (UNTH), Ituku/Ozalla, Enugu, Southeastern Nigeria.

**METHODS:** An analysis of retrospective clinical data from the ward admissions and discharge books and the operating theatre record books.

**RESULTS:** During the 10-year period under study (2000-2009), 407 cases of gynaecological cancers were admitted into the hospital. The age range of these women was 21-80years with mean age of  $54.6 \pm 14.2$  years. The commonest gynaecological cancers in women less than 30 years of age were choriocarcinoma (36.1%) and ovarian cancer (33.3%). After 30 years, cervical cancer became the commonest cancer. Overall, cervical cancer was by far the commonest gynecological cancer constituting 78% of all the cases, followed by ovarian cancer (8.9%), choriocarcinoma (4.3%), endometrial cancer (4.1%), vulva cancer (4.0%) and leiomyosarcoma (0.5%). There was no case of vaginal cancer during the study period. Anaemia was the commonest sequelae, complicating 55% of the cases, followed by genital fistulae (12%), infertility (3%), renal failure (3%), and pulmonary complications (2%).

**CONCLUSION:** Cervical cancer is by far the commonest gynaecological cancer in Enugu and there is high incidence of this cancer even in young women below the age of 30years. The commonest gynaecological cancer in women less than 30years is choriocarcinoma, and anaemia is the commonest sequelae of all gynaecological cancers.

**KEY WORDS:** Pattern, Relative frequency, Gynaecological Cancers, Enugu

### INTRODUCTION

Five cancers commonly affect the female reproductive organs. These include the cervical, ovarian, uterine, vaginal and vulval cancers. Cancer of the Fallopian

tube is very rare. These cancers are collectively referred to as gynecological cancers. Each is unique with its own different symptoms and signs. They also have different risk factors and different preventive strategies.

Organized screening no doubt has led to a rapid decline in the incidence, morbidity and mortality of cervical cancer in advanced countries,<sup>1</sup> but the same cannot be said in developing countries where organised screening services are poorly distributed with persistent rise in cervical cancer incidence.<sup>2</sup> While endometrial cancer is the commonest gynaecological cancer in developed countries,<sup>3</sup> cervical cancer is by far the commonest in developing countries with most cases presenting at the advanced stages of the disease.<sup>3,4,5</sup> Choriocarcinoma is common in Nigeria, and has been shown to be the second commonest genital tract malignancy in Ibadan.<sup>2</sup> Ovarian cancer is a major cause of death from gynaecological cancers with over 75% of cases presenting at the advanced stage of the disease.<sup>6</sup> Lack of a reliable screening tool has been implicated as the main driving factor. Vulval and vaginal cancers are uncommon, constituting only 1.6% and 3.1% respectively of genital tract cancers in Maiduguri.<sup>7</sup>

While these genital cancers have a worldwide distribution, their distribution and relative frequencies vary from one region to the other, and even among tribes within a given region. Although a previous study from the region over three decades ago determined the relative frequencies of gynaecological cancers,<sup>8</sup> the emergence of new diseases such as HIV/AIDS which have been strongly implicated as risk factors for certain gynaecological cancers such as cervical, vaginal and vulval cancers,<sup>9</sup> might have considerably altered the pattern of distribution of some of these cancers in the region.

### MATERIALS AND METHODS

Over a 10 year period (January 2000-December 2009), a retrospective study was carried out on all gynaecological cancers that presented at the University of Nigeria Teaching Hospital, Enugu. The sources of clinical data were the ward admission and discharge books and the operating theatre record books. From these data sources the age, parity, type of cancer, educational status, social status, religion, tribe, and the complications associated with each cancer were noted for each patient admitted with

gynaecological cancer. Where the patient had surgery, the above information was confirmed by comparison with information in the operating theatre record books. Almost all the patients had had histologically proven carcinoma, though details of histological diagnosis were not included in this study. Some cases of choriocarcinoma had been diagnosed on clinical and biochemical grounds.

The above data were first entered into 'case record forms' specifically prepared for the study and thereafter keyed into the *statistical package for social sciences (SPSS) computer software version 13.0 for windows*. The results were analysed using simple statistical methods.

### ETHICAL APPROVAL

The research and ethics committee of UNTH, Enugu, approved this review.

### RESULTS

Four hundred and seven cases of gynecological cancers were admitted into the gynaecological unit of the hospital during this period of study. However, four hundred case records (folders), constituting 98.3% of the cases were retrieved from the medical records. The total number of patients admitted into the gynaecological unit during the same period was 6,212. Thus, gynaecological cancers constituted 6.4% of total gynaecological admissions.

The age range of women was 21-80 years with mean age of  $54.6 \pm 14.2$  years. The majority of the patients were between 51-70 years age bracket and this constituted almost half (49%) of the patients studied (Table I).

**TABLE 1:** Age distribution of all the gynecological cancers

AGE	FREQUENCY	PERCENTAGE%
d 30	40	9
31-40	68	18
41-50	72	18
51-60	96	24
61-70	100	25
> 70	24	6
TOTAL	400	100

The commonest gynaecological cancers in women less than 30 years of age were choriocarcinoma (36.1%) and ovarian cancer (33.3%); cervical cancer constituted 27.8% and endometrial cancer constituted 2.8%. There was no vulval carcinoma or leiomyosarcoma in this age group. After 30 years, cervical cancer remained the commonest cancer in all age groups. These were shown in table II.

Sixty seven percent (67%) of women with gynecological cancers were grand multipara while

multiparous and nulliparous women constituted 23% and 10% respectively as shown in table III below.

Table 111: Parity distribution of gynecological cancers

PARITY	FREQUENCY	PERCENTAGE
Nullipara	40	10
Multipara	92	23
Grandmultipara	268	67
TOTAL	400	100

Sixty six percent (66%) of the women with gynecological cancers had no formal education while only 34% had at least primary education. Majority of the women, 360 (90%) were of Ibo tribe. The rest were made up of Idoma 16 (4%), Hausa 8 (2%), Igala 6 (1.5%), Urhobo 6 (1.5) and Yoruba 4 (1%). Almost all the women 392 (98%) were Christians and the remaining 8 (2%) were Moslems.

Cervical cancer was by far the commonest gynecological cancer constituting 78% of all the cases, followed by ovarian cancer (8.9%), choriocarcinoma (4.3%), endometrial cancer (4.1%), vulva cancer (4.0%) and leiomyosarcoma (0.5%). There was no case of vaginal cancer during the study period. This is shown in table IV below.

Table IV: Relative frequencies of gynecological cancers

CANCERS	FREQUENCY	PERCENTAGE
Cervical	312	78.0
Ovarian	37	9.3
Choriocarcinoma	18	4.5
Endometrial	16	4.0
Vulva	15	3.8
Leiomyosarcoma	2	0.5
Total	400	100

Anaemia was the commonest sequelae, complicating 55% of the cases, followed by genital fistulae (12%), infertility (3%), renal failure (3%), and pulmonary complications (2%); Table V. Half of the cases 156 (50%) of cervical cancer had anaemia while over three-quarter of other cases had anaemia; ovarian cancer 36 (97%), choriocarcinoma 16 (87%), endometrial cancer 15 (94%), vulva cancers 12 (80%), and leiomyosarcoma 2 (100%). Infertility as a complication was seen in only the cases of ovarian cancers and occurred in 32% of these cases at presentation. On the other hand, genital fistulae were seen in only the cases of cervical cancers and occurred in 15.5% of these cases at presentation.

Table V: Common complications of gynaecological cancers

MORBIDITY	FREQUENCY	PERCENTAGE
Anemia	220	55
Genital fistulae	48	12
Infertility	12	3
Renal failure	12	3
Pulmonary complication	8	2

**TABLE II:** Age distribution of individual gynecological cancers

AGE	CERVICAL	OVARIAN	CHORIO CARCINOMA	ENDOMETRIAL	VULVA	LEIOMYO SARCOMA	TOTAL
d 30	10	12	13	1	0	0	36
31-40	59	1	5	2	5	0	72
41-50	55	6	0	4	6	1	72
51-60	74	14	0	7	0	1	96
61-70	90	4	0	2	4	0	100
> 70	24	0	0	0	0	0	24
TOTAL	312	37	18	16	15	2	400

## DISCUSSION

Gynaecological cancers constituted 6.4% of all the gynaecological admissions in the hospital. This figure is higher than the 4.2 - 4.7% reported from previous studies in Nigeria<sup>3,10</sup> and the 2.8% reported from Ghana.<sup>11</sup> The higher prevalence may not be unconnected to the presence of numerous alternative tertiary and specialist hospitals in Enugu that often undertake the management of most other benign gynaecological conditions, thereby increasing the proportion of gynaecological cancers in our admissions. The largest numbers, 67%, of gynaecological cancers occurring in the 41-70years age group is comparable with 72.2% and 70.2% reported from Port-Harcourt, Nigeria and Accra, Ghana respectively.<sup>3,11</sup>

The finding from this study that cervical cancer was the commonest genital cancer affecting women was similar to most previous studies from Nigeria and other Sub-Sahara African countries<sup>3,7,10,11,12</sup> However, the 78% relative frequency obtained in this study is higher than the 62.7%, 62.3% and 57.8% obtained from previous studies done in Maiduguri, Ilorin and Accra in 2004, 2002 and 2000 respectively.<sup>7,11,12</sup> Nevertheless, this high figure is very similar to the 72.9% obtained at UBTH, Benin in 2007,<sup>13</sup> and the 73.1% obtained in a similar study from the same institution as far back as in 1979.<sup>8</sup> The persistent higher frequency of cervical cancer in this region compared to the other regions and countries may not be unconnected to the documented high incidence of early coitache associated with early marriage in this region.<sup>8</sup> The increased incidence from 73.1% about 30 years ago<sup>8</sup> to 78.0% now, might be connected to the effect of the newly emerging diseases such as HIV/AIDS on cervical cancer. It has been documented that the risk of cervical intraepithelial neoplasia (CIN) in HIV sero-positive women is at least five fold higher than their sero-negative counterparts, and CIN in sero-positive women is more likely to progress and recur after treatment.<sup>9</sup>

The second, third, and fourth commonest gynaecological cancers were ovarian cancer, choriocarcinoma and endometrial cancer, constituting 9.3%, 4.5% and 4.0% of the total gynaecological cancers in Enugu. These findings are similar to the findings from Maiduguri, Ilorin and Port-Harcourt in 2004, 2002, and 1995 respectively.<sup>7,12,14</sup> However, this was contrary to the finding from Accra in 2000 where endometrial cancer was the third commonest gynaecological cancer, being higher than choriocarcinoma.<sup>11</sup> The absence of a case of vaginal cancer over this period is similar to finding from a similar study from the same center over 30years ago where no case of vaginal cancer was recorded in a 5-year review.<sup>8</sup> This is however different from studies from other centers where at least a case of vaginal cancer is usually reported.<sup>7,11,14</sup>

That choriocarcinoma and ovarian cancer constituted the highest gynaecological cancers in women aged less than 30 years as found in this study is not different from the findings from other previous studies.<sup>7,11</sup> However, the finding that up to 10 women under the age of 30 years had cervical cancer, constituting about 27.8% of the women with gynaecological cancer in this age range, is much higher than the findings from most previous studies where at most two cases of cancer was recorded in this age group.<sup>7,11,12,14</sup>

The common complications of gynaecological cancers including anaemia, genital fistulae, infertility, and pulmonary complications, observed in this study were not different from findings from previous studies.<sup>3,8,14</sup>

## LIMITATIONS OF THIS STUDY

The greatest limitation of this study was lack of follow up. Data could not be obtained on the outcome of management of these gynaecological cancers and the records of deaths were almost nonexistent.

## CONCLUSION

Cervical cancer is by far the commonest gynaecological cancer in Enugu and there is high incidence of this cancer even in young women below the age of 30years. The commonest gynaecological cancer in women less than

30years is choriocarcinoma, and anaemia is the commonest sequelae of all gynaecological cancers.

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