

Gynaecological Malignant Tumours at Imo State University Teaching Hospital Orlu South Eastern Nigeria

*Umeobika JC¹, Ikeako LC¹, Ezenyeaku CT¹, Ezebialu UI¹, Ojiyi EC²

ABSTRACT

Background: Gynaecological malignancies are important component of reproductive health and contribute significantly to morbidity and mortality in women. They have a world-wide distribution which varies from region to region.

Objective: To determine the frequency and pattern of gynaecological malignancies at Imo State University Teaching Hospital, Orlu South Eastern Nigeria.

Methods: A retrospective analysis of all patients with histologically confirmed genital tract malignancies at the Department of Obstetrics and Gynaecology of Imo State University Teaching Hospital Orlu in South Eastern Nigeria from 1st of January, 2004 to 31st of December, 2013.

Results: Out of 218 cases of gynaecological malignancies, 131 (60.1%) were cervical cancer, 45(20.6%) were ovarian cancer, 23 (10.6%) were cancers of the corpus uteri, 12(5.5%) were choriocarcinoma, 11(5.1%) were endometrial cancers while vaginal cancer accounted for only 1 (0.5%). The age distribution was mainly within the 30-69 age range 184 (84.4%) with a peak occurrence at the 40-49 age group 75 (34.4%). The incidence of cervical and ovarian cancers peaked at 40-49 years with 52 (39.7%) and 11 (24.5%) of the individual cancers respectively. The gynaecological

malignancies appeared to occur less at the extremes of age (<20 years and ≥70 years).

Conclusion: Cervical cancer was the commonest type of gynaecological malignancy in this study, despite the fact that it is the most preventable of all the gynaecological malignancies and a major cause of morbidity and mortality in Nigeria. Establishment of a nationwide health insurance scheme that covers cervical cancer screening and human papilloma virus (HPV) vaccination augmented by health education and awareness creation is very vital towards curbing this ugly trend.

Keywords: Gynaecological, South East, Malignancy, Tumour, Nigeria.

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INTRODUCTION

Genital tract malignancies contribute significantly to morbidity and mortality worldwide and continue to pose management dilemma especially in resource-poor settings like Nigeria.¹⁻³ Majority of the gynaecological malignancies are widely distributed worldwide but their frequency and pattern differ from one region to the other. They vary from as low as 12.7% to 13.4% in North America to as high as 31.6% to 35% in sub-Saharan Africa.⁴ These wide variations in incidence are widely accounted for by health-seeking behaviour and organized screening for cervical cancer which is the commonest pelvic malignancy in women worldwide. The organized screening has been available and accepted in the developed nations for the past 50 years.³⁻⁵ In the developing nations of the world, Nigeria inclusive, there are few organized cervical cancer screening programmes with a good call and re-call system.⁶⁻⁸

¹Department of Obstetrics and Gynaecology, Chukwuemeka Odumegwu Ojukwu University Teaching Hospital (COOUTH), Awka, Anambra State, Nigeria.

²Department of Obstetrics and Gynaecology, Imo State University Teaching Hospital (IMSUTH), Orlu, Imo State, Nigeria.

*Corresponding author. Email: umeobikac@yahoo.com

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Cervical cancer is the most common cancer among women in Nigeria and the rest of Sub-Saharan Africa with a very poor 5-year survival rate because about two-thirds of the patients with the disease present with stage III disease and above as a result of failure to detect the lesion early.^{6,7} It accounted for 59.3% and 63.1% of all histologically confirmed gynaecological malignancies in Awka⁸ and Ilorin⁶ respectively in Nigeria. It is the leading cause of death per annum in women aged 35-45 years.⁶⁻⁸ Worldwide, cervical cancer is the second most common cancer in women after breast cancer but is the most common among women in developing countries.⁹⁻¹¹

Cervical cancer incidence is lowest in Western Asia and highest in Eastern Africa, with a seven-fold variation in world age-standardized incidence rates between the regions of the world.¹² It is the 12th most common malignancy amongst women in the United Kingdom, accounting for around 2% of all new cases of cancer in women.^{13, 14} In the U.K, around 19,000 women were still alive at the end of 2008, up to 10 years after being diagnosed with cervical cancer.¹⁵

Globally, it is estimated that there were more than 1.55 million women still alive in 2008 up to 5 years after their diagnosis.¹² In developed countries of the world, endometrial cancer is the commonest gynaecological malignancy and is said to be mainly a disease of ageing, postmenopausal women.⁴ Choriocarcinoma, followed by ovarian tumours, were the next commonest female genital cancer in Ibadan.¹⁶ Ovarian cancer was once the commonest gynaecological malignancy in the United Kingdom.¹⁷ It has been documented that factors like age, parity and race influence the incidence of gynaecological malignancies.⁴ Moreover, the advent of new diseases such as the Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome (HIV/AIDS) may appreciably alter the pattern of female gynaecological malignancies⁵. Despite the

high frequency and high morbidity and mortality associated with some of these gynaecological malignancies in our environment, there is a paucity of literature on the subject especially around this hospital in the South-East Nigeria. This study is therefore aimed at determining the pattern, relative frequencies and age distribution of these malignancies, the outcome of which may influence government policies towards preventive measures for these malignancies.

METHODS

This retrospective study covered the period from January 1st, 2004 to December 31st, 2013.

The case records of all patients admitted to the gynaecological ward of the Imo State University Teaching Hospital, Orlu with suspected gynaecological cancer were retrieved from the medical records department. The following information was extracted from the case records: age of the patients, site of the tumour and the diagnosis. Only histologically confirmed cancers were included in the analysis. Those cases without histological diagnoses or with incomplete data were excluded. The data so generated were analysed using IBM Statistical Package for Social Sciences (SPSS) version 20 (SPSS Inc., Chicago Il., USA) and the results expressed in descriptive statistics using percentages.

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RESULTS

There were two thousand, one hundred and thirty-seven (2,137) gynaecological cases seen over the study period and 231 (10.8%) of them were

malignancies. However, only 218 (10.2%) cases with complete data were used for the study.

Out of the 218 cases, cancer of the cervix was the commonest gynaecological malignancy accounting for 131 (60.1%) of the cases while the ovary was the second most common site with 45 cases (20.6%). Cancer of the vulva came third with 18 (6.2%) cases, choriocarcinoma contributed 12 (5.5%) while only 11 cases (5.1%) were endometrial malignancy.

The peak age of occurrence of these malignancies was within the age range of 40-49 years with 75 patients (34.4%) followed by 30-39 years and 50-59 years with respective contributions of 44 cases (20.2%) and 39 cases (17.9%). Age groups 60-69 years and 20-29 years contributed 26 (11.9%) and 19 (8.7%) cases respectively. The two extremes of ages seem to be spared by these malignancies with <20 years contributing 8 (3.7%) and ≥70 years accounting for 7 (3.2%) cases.

The distribution of the various gynaecological malignancies by age is also shown in Table II. Majority of the cases of cervical malignancy occurred between 30-59 years with 52 out of 131 cases (39.7%) occurring in the fifth decade of life. Ovarian malignancy has almost a uniform spread within the age range of 30-59 years with a marginal peak at 40-49 years. The 12 cases of choriocarcinoma in the study occurred within the reproductive age (20-49 years) while 10 out of the 11 cases of endometrial cancer occurred between 40-70 years. The peak age of incidence of vulval cancer was within the age range of 40-49 years where 7 cases (38.8%) were found. Only one case of vaginal cancer was documented in the study period coming from the ≥70-year age group.

Table I: Frequency distribution of the gynaecological malignancies by site.

Site of tumour	Frequency (N=218)	Percentage (%)
Cervix	131	60.1
Ovary	45	20.6
Vulva	18	8.2
Choriocarcinoma	12	5.5
Endometrium	11	5.1
Vagina	1	0.5
Total	218	100

Table II: Total and individual distribution of gynaecological malignancies by age

Age (Years)	Cervix N = 131 Freq (%)	Ovary N = 45 Freq (%)	Chorio- carcinoma N=12 Freq (%)	Endometrium N=11 Freq (%)	Vulva N = 18 Freq (%)	Vagina N = 1 Freq (%)	Total N= 218 Freq (%)
<20	2(1.5)	3(6.7)	2(16.6)	0(0)	1(5.6)	0(0)	8(3.7)
20-29	9(6.8)	4(8.9)	5(41.7)	0(0)	1(5.6)	0(0)	19(8.7)
30-39	28(21.4)	10(22.2)	4(33.3)	1(9.1)	1(5.6)	0(0)	44(20.2)
40-49	52(39.7)	11(24.5)	1(8.4)	4(36.4)	7(38.8)	0(0)	75(34.4)
50-59	23(17.6)	10(22.2)	0(0)	3(27.2)	3(16.6)	0(0)	39(17.9)
60-69	15(11.5)	5(11.1)	0(0)	2(18.2)	4(22.2)	0(0)	26(11.9)
≥70	2(1.5)	2(4.4)	0(0)	1(9.1)	1(5.6)	1(100)	7(3.2)
Total	131(100)	45(100)	12(100)	11(100)	18(100)	1(100)	218(100)

DISCUSSION

Cervical cancer accounted for 60.1% of all the gynaecological cancers thereby topping the list of all the gynaecological cancers recorded in this study. This is in agreement with the outcome of studies done by other researchers in other parts of Nigeria and other African countries.¹⁻³ It is, however, different from the outcome of the study by Jamal et al in Pakistan where ovarian cancer was the most frequent, accounting for 42.4% of all gynaecological cancers while cervical cancer was the second most common.¹⁸ The 60.1% recorded in this study is comparable with 57.8% reported in Ghana,³ 61.5% from Sokoto¹⁹ and 63.1% from Port-Harcourt.²⁰ It is however less than what was documented in similar studies done in Enugu²¹ and Maiduguri²² where 78% and 70.5% were documented respectively. These studies all point to the fact that the incidence of cervical cancer is unacceptably high in developing countries. This calls for urgent government policies and health education to arrest this trend.

The peak age of incidence of cervical cancer was found to be 40-49 years. This is comparable to 46.25±4.99 years, 42 years and 47 years documented by Yakasai et al, Briggs et al and Jamal et al respectively.^{1, 23, 18}

Ovarian cancer was the second commonest gynaecological cancer contributing 20.6% of all gynaecological cancers in this study. This is similar to what was reported in Kano by Yakasai et al, Maiduguri by Kyari et al, Enugu by Ugwu et al, Enugu by Okeke et al and Port-Harcourt by Briggs et al.^{1, 21-24} The peak age of incidence of ovarian cancer in this study was 40-49 years. This is similar to what is obtainable in the literature²⁵ where it is documented that worldwide, the highest incidence is in the 40-49 years age group. The gynaecological malignancies appear to occur less at the extremes of ages. This is understandable because some of the cancers like cervical cancer take up to 10 years and

above to get to the stage when the patient will recognize the symptoms and present to the hospital. They are therefore unlikely to present earlier than 20 years. Also, most of the people that develop the disease, due to the late presentation may have died from one complication or the other before the age of 70 years given that the peak age of incidence is 40-49 years.

Overall, cervical cancer and ovarian cancer accounted for almost 81% of the entire gynaecological malignancies in this study and both of them have the same peak incidence in the 40-49 age group. The rest of the gynaecological cancers including corpus uteri, vulva and vaginal cancer accounted for the remaining 19%. This goes to prove the fact that cancer of the cervix affects women at a time of life when they are critical to social and economic stability.²⁶ It is very disturbing that despite the fact that cancer of the cervix is very preventable, it continues to claim the lives of women in developing countries, Nigeria inclusive. For instance it is documented that out of about 275,000 deaths from cervical cancer annually, more than 87% occur in developing countries.²⁷ This situation is so because most of the cases of cervical cancer present at late stages when radiotherapy forms the bedrock of management.

Presently there is no functional radiotherapy centre in the whole of South-East and South-South of Nigeria. The few functional centres in the South-Western or Northern parts of the country are being overworked with the result that sometimes these patients do not get the treatment as and when due leading to increased morbidity and mortality. It is obvious that the developing countries cannot procure and maintain enough of the machines needed to manage advanced stage of these gynaecological cancers. We are then left with the option of preventing the preventable ones like

cancer of the cervix. This can be achieved through primary and secondary preventive strategies.

Since it is now documented that cervical cancer is caused by a sexually transmitted virus called human papilloma virus (HPV), it then means that its incidence will obviously be reduced by behavioural changes and immunization against HPV. Efforts and resources should be channelled towards health education, awareness creation and economic empowerment of women and girls. These could mitigate multiple sexual partners, early marriage, high parity, polygamy and illiteracy. Improved cervical cancer screening uptake and early presentation can also be achieved via awareness creation. HPV vaccines are now available but the cost is still on the high side for most people. It is recommended for people between 9 and 26 years of age preferably before coitarche.¹⁰ The government can improve the affordability by subsidizing the cost.

For the secondary prevention, cervical cancer screening has been shown to be very efficient and effective in the developed world. At present, there is no organized screening protocol in Nigeria.²⁴ What is obtainable is sporadic screening by non-governmental organizations. This type of arrangement will hardly impact any significant reduction in the burden of cervical cancer in Nigeria. The government should also find a way of formulating a policy for routine cervical cancer screening protocol and subsidize the cost to make it affordable.

The intra-abdominal location of the ovary makes the diagnosis of ovarian cancer very challenging. Also, the early symptoms of this cancer are non-specific, and many people are not aware of these symptoms. There is no standard screening technique for the detection of early stages of the disease. The various screening methods already tried have one draw-back or the other. However,

for people who are at a high risk of developing ovarian cancer, a combination of intermittent bimanual pelvic examination, transvaginal ultrasound and Ca125 where available may help in early detection.

Before concluding it would be important to acknowledge the fact that the findings in this study may have limited application because the data was collected from only cases that presented in the hospital. Some of these malignancies may have ended up at home or in some other health institutions hence not represented in this study. Also given the small sample size, the power of the study may not be strong enough for generalized application.

CONCLUSION

Cancer of the cervix tops the list of gynaecological cancers in this study despite the fact that it is preventable. It remains a major cause of morbidity and mortality in women in developing countries including Nigeria. To effectively formulate preventive strategies for cervical cancer especially in the area of use of HPV vaccine, further studies may be needed to routinely identify the particular serotype of HPV responsible for these cervical malignancies. This will help in determining the type of HPV vaccine from the currently available ones (Cervarix or Gardasil) that will best protect the women in that environment; since both of them can protect against serotypes 16 and 18 but only Gardasil can protect against other high-risk HPV like 31,33, 45, 52 and 58.

Finally, prevention, they say, is better than cure. Apart from health education and awareness creation on the avoidance of risk factors for these malignancies and increased uptake of screening procedures, the government should use the available resources to subsidize the provision of cervical cancer preventive strategies like vaccination and down staging of the disease

through simple screening methods like Papanicolaou smear, visual inspection under acetic acid (VIA), visual inspection under Lugol's iodine (VILI) and visual inspection under magnifying glass. Facilities like cryotherapy which can be used to manage these early lesions on the site once detected without having to give the patient another appointment for treatment should also be provided. This will help prevent the issue of loss to follow up.

Ethical considerations: Ethical clearance for the study was given by the Institutional Ethics Committee.

Author Contributions: Authors UJC and OEC developed the concept and design of the study, UJC, OEC and ECT did the literature search, OEC collected data, EIU, ILC and ECT handled data and statistical analysis, UJC, OEC and ILC prepared, edited and reviewed the final manuscript.

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