Endometrial Cancer in Ibadan: Epidemiological and Clinico-pathological Features -10 Year Review

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Abstract: Endometrial cancer is the commonest cancer of the female genital tract, it accounted for about 6 percent of all female cancers in United States. It is not as common in Africa; it was the third commonest gynaecological malignancy in an African study. The aim was to enumerate the characteristics of endometrial cancer patients: socio-demographic characteristic of the endometrial cancer patients, and the association of the patients' profile with endometrial cancer. This was a retrospective, cross sectional study of histologically diagnosed endometrial cancers at the University College Hospital (UCH), Ibadan. The data obtained were analyzed using SPSS. Endometrial cancer accounted for 3.1% of the female genital cancers; Obesity was a factor in most the patients; Poorly differentiated adenocarcinoma was the commonest observed pattern. Majority of the patients were elderly obese, they never engaged in contraception.

Key words: Endometrial, Cancer, Epidemiology, Pathology

Introduction

Endometrial cancer is the commonest cancer of the female genital tract, it accounted for about 6% of all female cancers in USA (1). Incidence had remained relatively static in whites however, mortality rates are increasing since 2001, and more so in African-American women than in all other racial/ ethnics groups (2). It is diagnosed mostly in the postmenopausal women of mean age 61 years; however, about 30% is diagnosed in younger women (3).

Endometrial cancer is not as common in Africa, (4) it was the third commonest gynaecological malignancy in an African study. (5) It is worth looking into because of the relative rise in life expectancy of African women (6) and the fact that prognosis in African women is worse. (7) Furthermore, In the United States there are significant differences in survival between African American and white women (8). While this could partly be due to differences in treatment between the two groups, African American women are significantly more likely to get high-grade tumours and to present at a later stage (9).

This cancer has been classified into two types based on clinical outcomes and histologic differences: type I is almost always preceded by endometrial hyperplasia due to unopposed oestrogen stimulation, while type II is oestrogen independent; it arises from atrophic endometrium as intraepithelial carcinoma. (10) There is a reported rise in incidence of type I cancer, while type II has been relatively stable. (11)

Risk of developing endometrial cancer in women of high parity is low however; pregnancy is protective against ovarian cancer while multi parity is associated with increased risk of development of cervical carcinoma (12). The major known risk factors for endometrial cancer impact the same influence on the black and white women, the observed difference in the incidence rates between the two populations may be due to differences in the prevalence of risk factors (13).

For women diagnosed in 1996-1999 there is a significant gap in five-year survival between the most deprived and least deprived women of 4.5%. (14) Regional differences in survival rates reflect this deprivation gradient. Wales had the lowest relative one and five-year survival rates for women diagnosed in 1986-90, while the South and West regions in England had the highest rates. (15)

The causes of endometrial cancer are not fully understood; researchers have found certain risk factors associated with the disease. The following risk factors were documented: Starting monthly periods before the age of 12, late menopause—after the age of 52, infertility, nulliparity, obesity, tamoxifen usage, estrogen replacement therapy, diabetes, older age of over 50 years, Caucasian origin, family history of endometrial cancer or colon cancer, personal history of breast or ovarian cancer and a prior radiation therapy for pelvic cancer among others.

We embarked on this study to enumerate the characteristics of endometrial cancer patients: socio-

demographic characteristic of the endometrial cancer patients, and the association of the patients' profile with endometrial cancer.

Materials and Methods

This was a retrospective, cross sectional study of histologically diagnosed endometrial cancers at the University College Hospital (UCH), Ibadan. The data used were extracted from the National Cancer Registry, based at the University College Hospital, Ibadan, the Cancer Registry is a World Health Organization approved.

The study group comprised 50 patients, who were managed as endometrial cancer patients between January 2000 and December, 2009; whose medical records and histology slides were available. Information retrieved from the medical records of the patients included, age, educational status, marital status, occupation, educational attainment, reproductive history: age at menarche and menopause, length of menstrual cycle, duration of menses, gravidity, parity, contraception, infertility and drug use for infertility. Others included history of polycystic ovary disease, family history of cancer, diabetes mellitus, history of hypertension, past medical history of cancer and the stage of cancer at diagnosis.

The data obtained were analyzed using SPSS (statistical package for social sciences) statistical software. Absolute numbers and simple percentages were used to describe categorical variables. Similarly, quantitative variables were described using measures of central tendency (mean, median) and measures of dispersion (range, standard deviation) as appropriate.

Result

A total of 15,423 cases of malignancies were diagnosed during the study period between January 2000 and December 2009. About 11% of the cases were genital tract malignancies; endometrial cancer accounted for 3.1% (50 patients).

Sixty two percent of the endometrial cancer patients were 55 years and above in age, traders (58%), married (84%), the commonest presenting complaint was bleeding per vagina in 96% of them, family history of endometrial cancer was absent in majority (92%) of the patients, 52% had only primary school leaving certificate, 72% were overweighed and obsessed, 72% did not avail themselves of contraception; of the 28% who engaged in contraception 57% of them used contraception for 3-5years. (Table 1)

Adenocarcinoma was the commonest histological type (36%); others were squamous cell carcinoma, (24%) adeno-squamous cell carcinoma (16%), and melanoma (14%) while other relatively uncommon histological patterns accounted for 10%. (Table 2)

Majority of the patients presented with poorly differentiated lesions (56%), moderately differentiated lesions were in 22% of the patients and only in 4% were well differentiated lesions found. (Table 3)

Discussion

Female genital tract malignancies accounted for about 11% of all malignancies treated in UCH over the ten-year study period; this figure is in tandem with the figure (11.5%) posted by Yakasai et al (5), in Northern Nigeria but higher than 4.18 to 4.70% reported by Briggs and and Katchy from Port Harcourt Nigeria (16), Emembolu and Ekwempu from Zaria Nigeria. (17) Agboeze et al (18) reported 8.4% and 2.8% by Nkyekyer (19) from Ghana within the same West African sub region. Such variation in the burden of cancer across geographic zones is not alien to researchers across the globe; a number of environmental and genetic factors have been mentioned.

Endometrial cancers accounted for 3.1% of female genital malignancies in this study which is at variance with 7.4% reported from northern Nigeria (5), and the 10.1% in the southern part of the country. (16)

Sixty two percent of the patients diagnosed of endometrial cancer were older than 54 years; this supports the fact that advancing age is the most important risk factor for cancer overall, and for a number of individual cancer types like endometrial cancer. (19)

Seventy-two percent of the patients in this study group were either overweight or obese. This is expected because literature is replete with evidence validating the role of obesity in cancer formation; obesity is an important risk factor in the development of a number of cancers and cancer related death.(20, 21) In all cancers, increasing body mass index (BMI) and obesity are associated; more so, endometrial cancer incidence and death.(20) Furthermore, it was documented that for every increase of BMI of 5 kg/m^2 there was a significant increase in a woman's risk of development of endometrial cancer.(22)

Majority of the endometrial cancer patients (72%) in this study did not use any form of contraception, this development validated the fact that women who use combined oral contraceptive pill for a period of 12months decrease their risk of endometrial cancer by fifty percent. (23)

Adenocarcinoma was the commonest histological pattern in this study, this is the pattern known and documented in literatures; however majority of these patients presented with poorly differentiated histological pattern, this pattern has

higher predilection for myometrial invasion and subsequent distant metastasis (24,25) which conforms to the fact that Caucasian women mostly presented with prognostically favourable endometrial carcinoma, as opposed to Asian and African-American women who had an increased risk of presenting with prognostically unfavorable types of endometrial carcinoma.(26)

Conclusion

Majority of the endometrial cancer patients managed at UCH, Ibadan were 55 years and older; they tended to be obese and did not avail themselves of contraceptives. There was no strong family history of endometrial cancer among these patients.

Poorly differentiated adenocarcinoma was the commonest histological pattern in the study.

Table 1. Age

	FREQUENCY	PERCENT (%)
AGE GROUP		
LESS THAN 35 YEARS	1	2.0
35-44 Years	3	6.0
45-54 Years	15	30.0
55-64 Years	17	34.0
Greater THAN 64 Years	14	28.0
OCCUPATION		
Trading	29	58.0
Civil Servant	14	28.0
Farmer	3	6.0
Others	4	8.0
FAMILY HISTORY OF CANCER		
Yes	4	8.0
No	46	92.0
HISTORY OF HYPERTENSION		
Yes	13	26.0
No	37	74.0
HISTORY OF DIABETES		
Yes	1	2.0
No	49	98.0
MARITAL STATUS		
Married	42	84.0
Single	1	2.0
Widow	7	14.0
EDUCATIONAL LEVEL		
Primary	26	52.0
Secondary	11	22.0
Tertiary	9	18.0
Others	4	8.0
BODY MASS INDEX DETAIL		
Underweight = <18.5	2	4.0
Normal Weight = 18.5–24.9	12	24.0
Overweight = 25–29.9	20	40.0
Obesity = BMI Of 30 Or >	16	32.0
CONTRACEPTION USE		
Yes	14	28.0
No	36	72.0
DURATION OF CONTRACEPTIVE USE		
3-5 Years	8	57.1
6-8 Years	4	28.6
More Dawn 8 Years	2	14.3
PRESENTING COMPLAINTS		
Bleeding	48	96.0
Swelling	2	4.0

Table 2. Histology

	Frequency	Percent	Valid Percent	Cumulative Percent
Adenocarcinoma	18	36.0	36.0	36.0
Squamous cell carcinoma	12	24.0	24.0	52.0
Adeno-squamous cell carcinoma	8	16.0	16.0	68.0
Melanoma	7	14.0	14.0	82.0
Others	5	10.0	10.0	100.0
Total	50	100.0	100.0	

Table 3. Cancer Grade

	Frequency	Percent	Valid Percent	Cumulative Percent
well differentiated	4	8.0	8.0	8.0
Moderately differentiated	11	22.0	22.0	30.0
Poorly differentiated	28	56.0	56.0	86.0
Other	7	14.0	14.0	100.0
Total	50	100.0	100.0	

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