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MALIGNANT TUMOURS OF FEMALE GENITAL TRACT IN NORTH EASTERN NIGERIA

O. Kyari, FRCOG, Department of Obstetric and Gynaecology, H. Nggada, FMC Path, Department of Histopathology, Maiduguri Teaching Hospital, and A. Mairiga, MHPM, FWACS, Department of Obstetrics and Gynaecology, University of Maiduguri Teaching Hospital, P.M.B 1414, Maiduguri, Nigeria

Request for reprints to: Dr. O. Kyari, Department of Obstetrics and Gynaecology, University of Maiduguri Teaching Hospital, P.M.B 1414, Maiduguri, Nigeria

## MALIGNANT TUMOURS OF FEMALE GENITAL TRACT IN NORTH EASTERN NIGERIA

O. KYARI, H. NGGADA and A. MAIRIGA

### ABSTRACT

**Objective:** To ascertain the pattern and frequency of malignant tumours of female genital tract in North Eastern Nigeria.

**Design:** A retrospective analysis of surgical biopsy materials.

**Setting:** University of Maiduguri Teaching Hospital, the only teaching hospital in the North Eastern region of Nigeria.

**Subjects:** Three hundred and eighty-two cases of female genital malignancies histologically confirmed between January 1st 1991 and December 31st 2000.

**Results:** The age range of patients whose specimens were received during the ten year period was three to eighty years. Mean age of presentation was 44.2 years, (SD±13). Cancer of the uterine cervix was the most common (70.5%), followed by ovarian cancer (16.3%), then cancer involving the uterus (8.5%). There was a steep rise in reported cases within the period of study especially for cancer of the cervix. Ovarian tumours were the most common tumours in the teenage group.

**Conclusion:** The high incidence of cancer of the uterine cervix and the early mean age of presentation of all malignancies underlies the importance of screening programmes and awareness campaign in our community. The study also provides the basis for further analysis of female genital malignancies.

### INTRODUCTION

Most malignant female genital tumours have a worldwide distribution, but the distribution and frequency vary from one region to the other. Although four main reports from different parts of Nigeria(1-4), have attempted to focus on patterns of malignant tumours of female genital tract. To our knowledge none has dealt specifically with the tumours in Northern Nigeria.

Organised screening has contributed to a decline of cancer of uterine cervix incidence and mortality over the past 50 years in developed countries(5). However, women in developing countries are yet to profit from the benefits of screening programmes, and therefore, uterine cervical cancer rate remain high in Nigeria(4). Ovarian cancer is a major cause of death from gynaecological malignancies. About 75% of patients with the entity present with advanced disease as a result of failure to detect the tumour early(6).

Choriocarcinoma is the second most common female genital malignancy in Ibadan(4). Fifty percent of cases proceeded by molar gestation, 40% by normal pregnancy, 5% by abortion or ectopic pregnancy and 5% are of non-gestational origin(5).

Despite the high frequency of some malignant female genital tumours in our environment, there is a paucity of literature on the subject in Nigeria especially the northern part of the country. Therefore, this study

aimed at increasing the knowledge on the subject and provide baseline data on the topic in North Eastern Nigeria. These findings could have a significant implication on health planning and clinical practice in our locality. Furthermore, the emergence of new diseases such as the Acquired Immune Deficiency Syndrome (AIDS) may conceivably alter the pattern of female genital malignancies(5).

### MATERIALS AND METHODS

This retrospective investigation is based on a study of surgical biopsy materials received in the Histopathology Laboratory of University of Maiduguri Teaching Hospital (UMTH), Maiduguri, from January 1st 1991 through December 31st 2000. The sources of specimens were:

In-patients biopsy specimens and referrals from government and private health centres.

Demographic data, which included: Age of patients, site of tumour and diagnosis were extracted from the cancer registry, request forms and patients' cases files. These specimens were fixed in 10% formal saline embedded in paraffin wax. Sections were stained with routine haematoxylin and eosin. The results were analysed using simple statistical methods.

### RESULTS

One thousand six hundred and eighty two cases of histologically confirmed cancers were recorded during the ten years period of study with a mean annual

total of 168 cases. During this period there were 887 registered cases of cancers of all sites among females, while 387 cases were female genital cancers. Thus, malignant tumours of female genital tract accounted for 23.0% of all the cancers diagnosed and 43.6% of all female cancers.

The age range of patients whose specimens were received was 3-80 years and a mean age of presentation of 44.2 years (SD±13). In this study choriocarcinoma accounted for only 4.1% of malignant tumours of female genital tract. Cancer of the uterine cervix accounted for the majority (70.5%) of all the female genital cancers, followed by the ovarian cancers (16.3%) and then uterine cancer (8.5%) (Table 1).

**Table 1**

*Site distribution of malignant tumours of female genital tract*

Site of tumour	No. of cases	(%)
Cervix	273	70.5
Ovary	63	16.3
Uterus	33	8.5
Choriocarcinoma	(16)	(4.1)
Others	(17)	(4.4)
Vagina	2	3.1
Vulva	6	1.6
Total	387	100

**Table 2**

*Age distribution of malignant tumours of female genital tract*

Age (years)	No. of cases	(%)
<20	13	3.4
20-29	24	6.2
30-39	77	19.9
40-49	104	26.9
50-59	87	22.5
60	56	14.5
Not specified	26	6.7
Total	387	100

**Table 3**

*Age distribution of individual malignant tumours female genital tract*

Age (years)	Cancers of				
	Cervix	Ovary	Uterus	Vagina	Vulva
<20	1	8	3	1	-
20-29	15	3	6	-	-
30-39	57	12	5	3	-
40-49	83	10	3	7	1
50-59	64	13	8	-	2
60	36	12	5	-	3
Unspecified	17	5	3	1	-
Total	273	63	33	12	6

**Figure 1**

*Yearly distribution of malignant tumours of female genital tract*

**Figure 2**

*Age distribution of malignant tumours of female genital tract*

About 49.4% of cancer cases presented at the 5th and 6th decades of life (Table 2), and rarely below the age of 30 years. Figure 1 demonstrates the yearly distribution of the gynaecological malignancies within the study period. There were declines of reported cases in 1993/1994 and 1998/1999 periods. It should however, be noted that those periods were disrupted by health workers national industrial disputes, steep economic decline and fuel crises that probably affected hospital attendance.

The frequency of carcinoma of the cervix increased sharply during the period of study (except for the periods of the declines), while ovarian and uterine cancers remained constant (Figure 2). Absence of screening programmes, increase awareness and change in life styles (increase unprotected sexual activities) might have been responsible for the increased frequency and diagnosis of the cancers of the uterine cervix. Ovarian cancers are the common malignancies of the teenage group, followed by uterine cancers (Table 3).

## DISCUSSION

The UMTH serves as a referral center for the north eastern sub-region of Nigeria, and quite a number of patients are also seen from the neighbouring countries of Niger, Chad and Cameroon Republics.

Malignant tumours of female genital tract accounted for 43.6% of all female cancers, while cancers of the uterine cervix accounted for the majority (70.5%), ovarian tumours (16.3%) and uterine tumours (8.5%). Although breast cancer is the most common tumour affecting women world wide, cancer of the uterine cervix is the most common in the developing countries(7). Babarinsa *et al.* in Ibadan found 62.7% of all female genital cancers to be cancers of the uterine cervix(4). Except an early report from Benin(8), all other incidences (from hospital-based records) in other parts of Nigeria(2-5) were lower than our findings. This could be attributed to early marriage and high number of live birth in our region(9).

Epidemiological studies have consistently indicated that the risk of cancer of the uterine cervix is strongly influenced by measures of sexual activity(5). Human papilloma virus (HPV) DNA is found in 99.7% of cervical cancers(10). Tobacco smoking has been a well-known risk factor for cervical cancer(11). Other factors include high number of live births, long-term use (12 years or more) of oral contraceptives, lack of food containing beta-carotene, vitamin C and to a lesser extent vitamin A(5). The risk of cervical intraepithelial neoplasm (CIN) in HIV sero-positive women is at least five fold higher than in their sero-negative counterparts, and CIN in sero-positive women is more likely to progress and recur after treatment(11). Unlike a

study from Ibadan(4), the second common female genital cancers were ovarian tumours. which accounted for 16.3% of the cancers. Carcinoma of the ovary is now the most common malignant tumour found in gynaecology in the United Kingdom(12). Similar to our finding, Onuigbo found that ovarian tumours were the most common tumours in the teenage group in Enugu(13). Obed *et al.* in an earlier study found out that 20.7% of ovarian tumours in Maiduguri were malignant tumours(14).

About 94% of ovarian tumours are said to arise from the surface epithelium of the ovary(6), but in UMTH only 40.5% were epithelial tumours(14). The events leading to malignant transformation within these cells are uncertain, but risk factors that appear to be related to the development of ovarian cancers include genetic, environmental and hormonal factors(15).

Choriocarcinoma was found to be the second most common malignant tumour of female genital tract in Ibadan(3,4), but in this study it accounted for only 4.1%. Considering that choriocarcinoma can complicate any conception and that its presentation may mislead clinicians(4), it is possible that the true frequency of this entity is much higher than is suggested from this study.

The data presented in this study were certainly not representative of community prevalence rates, they may be higher. More so cancer statistic go beyond hospital based data(4). But what do these figures imply for cancer prevention and diagnosis in our environment? Cancer of the uterine cervix rate is high in the catchment area of north eastern Nigeria, and affecting female of younger age. Other female genital tract malignancies are also a significant problem, especially when problems of diagnosis and management are concerned, therefore, cancer screening practice and increased physician awareness deserve prompt institution at all levels of health care.

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