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Cervical carcinoma in Nigeria — A need for early detection^{*}

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A retrospective review of 526 histologically confirmed cases of carcinoma of the cervix uteri seen at UCH Ibadan showed that the mean age was 51.8 years and over 64% of the patients had a parity of 6 or higher. Large cell non-keratinising squamous carcinoma was predominant and 51.8% of cases were late presenters (Stages III and IV). Patients presenting with Stage IV disease were nearly twice as many as those with Stage IB. These findings are compared with those of two previous ten-year reviews in this hospital.

The cause and implications of late presentation are discussed and the need to shift emphasis from expensive but unrewarding palliative treatment to cost-effective preventive management, starting from the primary health care level, is underscored.

Resume

A L'UCH Ibadan, on a confirme apres une etude des structures minutes des tissus cervicaux, que 526 patients avaient le carcinome du col de l'uterus une revue retrospective de ces 526 cas a montre que l'age moyen des patientes etait 51.8 ans et que 64% d'eux avaient eu, chacune, pas moins de 6 enfants.

Le carcinome qui s'est manifeste d'une facon predominante etait caracterise par des grandes cellules squameuses mais que ne se racornissaient pas. Et 51.8% des cas se sont presentees en retard (aux etapes III et IV). Les patientes qui se sont presentees au quatrieme etape de la maladie etaient presque deux fois plus nombreuses que celles se presentant au troisieme etape.

En comparant les resultats de cette revue-ci avec ceux des deux revues precedentes (couvrant chacune une periode de six ans) on voit qu'il n'ya eu aucun change significatif dans la facon d'envisager la situation des patients atteintes par la maladie et ceci en d'pit de l'amelioration des facilites generales aussi

que medicales.

Les causes et les implications de la presentation tardive sont discutees et on a mis en evidence le besoin de mettre des lors plus d'emphase sur les mesures preventives que sur les mesures palliatives. Ceci doit etre aborde, tout premierement, au niveau de la sante primaire.

Introduction

It has been estimated that there are about half a million new cases of carcinoma of the cervix per year and 77% of these are in less developed countries, where this condition is frequently the leading cause of death from cancer among women[1,2]. At the University College Hospital (UCH), Ibadan, carcinoma of the cervix is by far the most common malignant tumour seen in women, with a relative ratio frequency of 19.9% [3]. Similar observations have been made elsewhere in Nigeria[4,5]. The clinico-pathological correlates of this malignancy as seen at UCH are reasonably representative of the nationwide situation since many patients are referred to this hospital for radiotherapy from all parts of the Country.

It has been established that the stage of the disease as determined by clinical examination at presentation plays the major role in predicting the course of the disease[6]. Previous reviews of carcinoma of the cervix in this hospital showed that many patients presented in the late stages (III and IV) of the disease[7,9].

In the intervening two decades since the last major review[7], there have been improvements in general medical services in the Country, as well as in facilities for public education, notably the mass media. Cervical cytological examination is now available in some hospitals and external radiotherapy is now available in this hospital. To assess the impact

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(or lack of it) of these developments on the clinical presentation of carcinoma of the uterine cervix, this study was undertaken.

Materials and methods

Between 1 January, 1980 and 31 December, 1989, nine hundred and eighty cases were clinically diagnosed as carcinoma of the uterine cervix at UCH. Of these 560 were histologically confirmed to be invasive cervical cancer and the case records of 526 were available for analysis. The age, parity and clinical stage at presentation were recorded for each case reviewed. The histological diagnoses were also noted. The clinical staging and cervical biopsy were usually done at examination under anaesthesia, but cytoscropy and excretory urography were done only in a small number of cases due to constraints of finance and equipment. Clinical staging was based on the old FIGO classification which was operative during the years under review[10]. Survival rates could not be analysed since the vast majority of our patients were lost to follow-up soon after radiotherapy, presumably because they were dying at home or had lost confidence in orthodox medicine.

The observations made from these cases were compared with those of two previous reviews of cases managed in this hospital between 1953 and 1962[8], and between October, 1962 and September, 1972[7]. The clinical stage at presentation was also compared with findings from a 10-year study at the Mayo Clinic, United States of America[6] and a small prospective study at the Ahmadu Bello University Teaching Hospital (ABUTH), Zaria[4]. Where relevant, the findings were subjected to statistical test of significance (X^2) and differences were considered significant if $P < 0.05$.

Results

The mean age of all cases was 45 years in each of the previous UCH reviews, but 51.8 years in the current review. Figure 1 shows the age distribution of patients in the three decades reviewed. In 1980-89, 56.4% of the cases were aged between 46 and 65 years, while in the two previous reviews, the peak incidence occurred in the 36-45 year age group. Statistical analysis of the age distribution in the three decades showed that there was significant difference between 1962-72 and 1980-89 ($P = 0.001$) but none between 1953-62 and 1962-72.



Fig. 1: Age distribution of women with carcinoma of the uterine cervix in UCH, Ibadan.

Figure 2 shows the parity distribution of patients seen in the decades 1962-72 and 1980-89. The observed differences were not statistically significant ($P = 0.18$). Over 64% of the patients seen between 1980 and 1989 had had six or more deliveries, including 74 patients (14%) who had a parity of 10 or above. The average parity of patients in 1953-62 was 4.5 while 27.8% of cases seen in 1962-72 had 8 or more children.

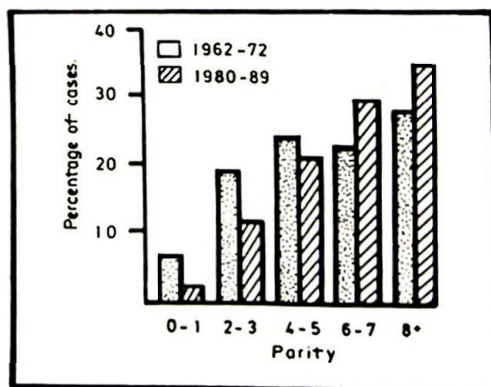


Fig. 2: Parity distribution of women with carcinoma of the uterine cervix in UCH, Ibadan.

Table 1 shows the histological grading of the cases seen in 1980-89. There was a preponderance of squamous cell carcinoma in the three decades, but the percentage of adenocarcinoma increased from 3% in 1953-62 to 4.5% in 1962-72 and 5.7% in 1980-89. Of the squamous variety seen between 1980 and 1989, precise ratios of the sub-classes could not be calculated because many cases were simply reported as "squamous cell carcinoma" and some were classified on the basis of degree of differentiation rather than cell type, but the large cell non-keratinising variant was predominant.

Table 2 shows the clinical stage at presentation in women with cervical cancer at two centres in Nigeria and one in U.S.A. Between 1980 and 1989, 51.8% of cases seen at UCH were late presenters (Stages III and IV). The corresponding figures for 1953-62 and 1962-72 were 80% and 62.5%, while at ABUTH it was 73.4%. Statistical analysis of the UCH figures for the three decades reviewed showed that there was significant difference in clinical stage at presentation between 1953-62 and 1962-72 ($P = 0.01$) but none between 1962-72 and 1980-89 ($P = 0.17$).

Table 1: Histological diagnosis in 560 cases of cervical cancer seen at U.C.H., Ibadan, 1980-89

Squamous Cell Carcinoma	
Keratinising	81
Large Cell, non-keratinising	133
Small Cell, non-keratinising	24
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Well differentiated	12
Moderately differentiated	30
Poorly differentiated	57
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Undifferentiated	3
Anaplastic	6
Not sub-classified	177
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	523 (93.4%)
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Adenocarcinoma	
Clear Cell	5
Papillary	1
Poorly differentiated	2
Adenosquamous	11
Not sub-classified	13
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	32 (5.7%)
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Carcinosarcoma	3
Leiomyosarcoma	1

Table 2: Clinical stage at presentation of women with carcinoma of the uterine cervix in Nigeria and USA

Clinical Stage	U.C.H.	U.C.H.	U.C.H.	ABUTH	Mayo Clinic
	1953-62	1962-72	1980-89	1984	1960-1970
	(%)	No. of Cases (%)	No. of Cases (%)	No. of Cases (%)	No. of Cases (%)
IB		62 (10.4)	39 (7.5)	2 (4.4)	83 (42.4)
IIA	(20)	72 (12.1)	96 (18.3)	4 (8.9)	81 (41.4)
IIB		89 (15.0)	117 (22.4)	6 (13.3)	
I & II	(20)	223 (37.5)	252 (48.2)	12 (26.6)	164 (83.8)
IIIA	(80)	208 (35.0)	54 (10.3)	25 (55.6)	23 (11.7)
IIIB			149 (28.5)		
IV		163 (27.5)	68 (13.0)	8 (17.8)	9 (4.6)
III & IV	(80)	371 (62.5)	271 (51.8)	33 (73.4)	32 (16.3)
TOTAL	246 (100)	594 (100)	523 (100)	45 (100)	196 (100)

Table 2 also shows that in the Nigerian studies, the number of cases presenting with Stage IV disease was 2-4 times the number of Stage IB cases. In the U.S.A., the reverse obtained: 83.8% of cases were early presenters (Stages I & II) and the number of Stages IB cases was approaching ten times the number of Stage IV cases.

Discussion

Cervical neoplasm is unique in affording the clinician the opportunity of early diagnosis because of the accessibility of the cervix to direct visualisation and the exfoliation of cervical epithelial cells. With advances in cervical cytology, colposcopy and immunodiagnosis, the developed countries have placed emphasis on detection of the premalignant stages. Although there are facilities for cervical cytology in some hospitals in Nigeria, they serve only a limited selection of women since they are usually an appendage of family planning services. There are no public health programmes organised primarily to screen for carcinoma of the cervix.

Although not everyone agrees[11], cervical cytology has reduced the incidence and mortality rates for invasive carcinoma of the cervix in countries where routine screening is done[12], and as the incidence has fallen the proportion of patients with early stage disease has risen. This trend is yet to manifest in Nigeria, as Table II shows. This is partly due to the non-availability of routine cytological screening but also due to ignorance, shyness, fear of hospitals, cost of orthodox medical care and patronage of traditional medical practitioners. Most of our women are ignorant of the significance of early symptoms such as post-coital bleeding and abnormal vaginal discharge. Even when they are disturbed by these symptoms, cultural imperatives make them too shy to discuss their worries with their husbands, children or relatives until the situation gets out of hand.

The percentage of late presenters in this study (51.8%) is a significant improvement over the percentage for 1953-62 (80%) but not significantly different from that of 1962-72 (62.5%). A similar but smaller comparative study in this hospital showed no improvement in the stage or duration of symptoms at presentation over a span of ten years[13].

If all that we are achieving with most of our cases of carcinoma of the cervix is to offer palliative

radiotherapy and send them home to die, a cost-benefit analysis is called for. A patient with Stage III (Table 3) carcinoma of the cervix who receives palliative brachy- and tele-therapy spends at least ₦2,000.00k excluding transport fares and the social burden on relatives. This is a lot of money for our patients, most of whom are in the low socio-economic group. Also the hospital spends scarce foreign exchange and local currency to maintain its Cobalt 60 machine. All this expenditure is difficult to justify if the prognosis is so poor.

Table 3: Conservatively estimated cost of treatment of Stage III carcinoma of the uterine cervix at UCH Ibadan

Hospital bed at ₦50 per week for three weeks of hospital admission	₦150
Feeding	200
Cost of drugs administered during admission	300
Fee for cross-matching of two units of blood	140
Cost of radiological investigations	
— I.V.U.	250
— Check X-ray Pelvis after insertion of Cs. applicators	50
Hospital fees for teletherapy	500
Operation fees for EUA and insertion of caesium applicators	750
TOTAL	₦2,340.00

While some workers would no longer regard a gynaecological clinic as complete unless facilities for cervical cytology are available[14], others have argued that mass screening of the population did not justify the cost and was premature in developing countries[15]. Screening for cervical cancer utilising the Papanicolaou smear requires expensive logistic back-up including laboratories, trained personnel and administrative support, but if well-managed and focussed in high-risk groups could be cost-effective. In a high-risk group screened for cervical intra-epithelial neoplasia (CIN) in our hospital, a high incidence (9.3%) was reported[16]. For every 100 patients screened at a cost of ₦5,000.00, there were 2 patients with severe dysplasia/carcinoma-in-situ (CIN 3) and 7 others with less severe abnormality which may progress to invasive carcinoma. Thus, a crude comparison shows that the cost of palliatively treating 2 cases of advanced

cervical carcinoma is more than that required to identify 9 subjects with premalignant disease. Specific curative therapy for these subjects is also less expensive than treatment of frankly malignant diseases.

There is an urgent need for a national screening programme starting with women attending sexually transmitted diseases clinics, grandmultiparous women of low socio-economic status, and women starting sexual activity early in life. The programme should be linked with appropriate referral and follow-up services, as well as with the recently established National Cancer Registries.

While new technology is being developed towards mass application of human papilloma virus DNA detection at low cost, various workers have suggested simple alternatives for cervical cancer control in developing countries. One of these is the simple "down-staging" detection programme which proposes regular speculum examination of women's cervixes to detect invasive carcinoma at an early stage[17]. This kind of screening, which can be done by non-physician health workers, is not a substitute for cervical cytology, but pending the establishment of community-based mass screening programmes, it could be useful in picking up women with suspicious cervixes. Thus, provision of a bivalve speculum in all primary health care centres could be a significant step towards early detection of cervical cancer.

Another simple but important effort towards cervical cancer control is public education[13]. Perhaps because it falls within what is regarded as the 'private part', there is little or no mention of the cervix in public health education. Carcinoma of the breast which has a lower relative frequency ratio (11.2%) than cervical carcinoma (19.9%) at the Ibadan Cancer Registry[3] gets by far more mass media attention, in spite of the advantage of a detectable pre-invasive stage which cervical cancer has over breast cancer.

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