ORIGINAL ARTICLE

Profile and retrospective analysis of the use of preventive strategies in patients with cervical cancer in South-South Nigeria

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ABSTRACT

Background: Cervical cancer is the commonest malignancy of the female genital tract in developing countries, with a global burden of 530,000 new cases annually. This study aims to review the current situation of this important malignancy and to assess the previous use of preventive measures in patients with cervical cancer at the Port Harcourt Teaching Hospital (UPTH), Port Harcourt, Nigeria. **Materials and Methods:** This was a retrospective review of all cases of cervical cancer managed at the UPTH, Port Harcourt, Nigeria, between 1 January 2008 and 31 December, 2012. **Results:** The prevalence of cervical cancer was 3.53% of all gynaecological admissions. The peak age of incidence was 50-59 years, accounting for 40% of the study population. Women with high parity contributed to 93.3% of the study population. Early coitarche was observed in 78.7% and a history of multiple sexual partners in 65.3%. Vaginal bleeding was the commonest clinical feature seen in all the women studied, followed by pelvic pain in 84% of cases. Advanced-stage cervical cancer was seen in 93.4%. None of the women studied had been previously vaccinated against human papilloma virus (HPV), and only 1.3% had had any form of screening methods for early detection of cervical cancer. **Conclusion:** Cervical cancer remains an important cancer in our environment, and late presentation with advance disease is still the norm despite advances in screening and preventive modalities. The reason for this is buttressed on the finding that despite the availability of these preventive strategies, women in the South-South of Nigeria did not partake of these measures. There is an urgent need to develop programmes to re-sensitise women on the need for screening and vaccination to reduce cancer-associated morbidity and mortality in Port Harcourt, South-South Nigeria.

Key words: Cervical cancer, human papilloma virus vaccination, papanicolaou smear, port harcourt

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INTRODUCTION

Cervical cancer is the second most common malignancy among women worldwide.[1] It is the commonest malignancy of the female genital tract in developing countries.[2-4] It has a heavy global burden, with 530,000 new cases and 275,000 maternal deaths reported annually.[5] Approximately 83% of these cases occur in developing countries, where it is the leading cause of cancer-related death among women.[5] In Nigeria, it is the second most common female cancer after breast cancer, with an age standardised prevalence rate of 34.5 cases per 1000 women.[6] Age standardised rates of 4.68, 4.55 and 38.9 cases per 1000 women were recorded in Spain, USA and India, respectively.[7-9] Research has established that the incidence of cervical cancer peaks in the fourth decade of life, with a median age at diagnosis of 48 years.[9] The number of elderly patients being diagnosed with cervical cancer is increasing in Europe, and older women account for >40% of the deaths from cervical cancer annually.[9]

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The morbidity and mortality of this preventable disease continue to remain high in developing countries like Nigeria, whereas in developed countries it continues to be on the decline. The difference in the incidence of cancer of the cervix between developed and developing countries illustrates the huge disparity in wealth and availability of extensive screening programmes. The prevalence of this disease in Europe and America has decreased considerably because of the widespread use of screening procedures such as Papanicolaou (Pap) test adopted in the second

half of the 20th century. This disease, unfortunately, is yet to be recognised as an important public health problem in Nigeria and is also yet to be seen as an important cause of misery in women evident by the lack of universal screening policy and the use of available preventive measures such as vaccination, as obtainable in developed countries.

Virtually all cases of cervical pre-cancer and cancer are associated with high-risk human papillomavirus (hrHPV) infection, with serotypes 16 and 18 reported to account for the majority of cases.[10,11] However, only approximately 12% of individuals with HPV infection develop cervical pre-cancer and cancer.[12] Hence, hrHPV infection can be a cause of cervical cancer, but is not the exclusive cause. In addition to hrHPV, other factors impact progression from persistent hrHPV infection to cervical pre-cancer and cancer. These include smoking, high parity, early coitarche, diet, immune suppressive conditions such as HIV, high-risk sexual behaviour, oral contraceptives, obesity, illiteracy and ageing.[13,14]

The disease could be asymptomatic or symptomatic in its presentation. It could be discovered accidentally through screening procedures or during evaluation for family planning.[15] Symptoms such as irregular and/or abnormal vaginal bleeding, contact vaginal bleeding, vaginal discharge which could be malodourous from secondary infection and in advanced disease, systemic features like cachexia, micturition symptoms, pelvic pain, rectal symptoms and pedal oedema may be seen.[16]

This study aims to determine the prevalence, predisposing factors and clinical presentation of cervical cancer and to analyse the uptake of preventive measures amongst this group of patients with cervical malignancy in Port Harcourt in the presence of preventive and screening modalities.

MATERIALS AND METHODS

This was a retrospective review of all cases of cervical cancer managed at the UPTH, Port Harcourt, Nigeria, between 1 January 2008 and 31 December 2012. Permissions were obtained from the Heads of the Department of Obstetrics and Gynaecology and Medical Records Department for the use of patient records for conducting this study. The names and folder numbers of all cases of cervical cancer over the period under review were obtained from the gynaecology ward and theatre registers. The folder numbers were used to trace the case files of the patient from the Medical Records Department, and relevant data were extracted from the case files. The information obtained were age, parity, marital status, occupation, level of education, husband's occupation, predisposing factors, previous screening methods used and vaccination against cervical cancer, clinical features and findings at examination under anaesthesia (EUA) and stage of the disease. The socioeconomic status of the women in this study was calculated using the patient's level of education and the husband's occupation as described by Olusanya *et al*.[17] The data were analysed using the SPSS version 19.0 (IBM, Armonk, NY, USA) for windows computer software.

RESULTS

A total of 99 cases of cervical cancer were identified out of 2,803 gynaecological admissions over the period under review, giving a prevalence rate for cervical cancer of 3.53%. In all, 75 case notes had complete information for analysis, giving a case retrieval rate of 75.8%. Table 1 summarises the age distribution of the patients, which ranged between 26 and 75 years with a mean age of 53.55 years (±9.3). The peak age of incidence of 50-59 years was observed in 40% of the patients. Only 3.9% of patients were aged<40 years.

The risk factors for cervical cancer are shown in Table 2. The parity distribution ranged between 1 and 12. High parity (women with three or more previous deliveries) was noted in 93.3% of the women. A total of 70 (93.3%) women were married, 2 (2.7%) were single and 3 (4.0%) were divorced. In all, 53 (75.7%) patients were of low socioeconomic status, 59 (78.7%) had early coitarche (age > 18 years) and 32 (42.7%) had used oral contraceptive pills previously. A history of multiple sexual partners was seen in 65.3% of the women. Immune-suppressive conditions like HIV and diabetes mellitus occurred in 14.7% of patients. None of the women had any form of screening for cervical cancer, with the exception of one who had had previous Pap smear (1.3%), despite that 32% (24) of the women were aware of at least one modality of screening. None of the women studied had previously been vaccinated against HPV.

The clinical features of patients presenting with cervical cancer are displayed in Table 3. Vaginal bleeding was the commonest and was seen in all patients. Pelvic pain, vaginal discharge and weight loss were seen in 63 (84%), 57 (76%) and 43 (57.3%) patients, respectively. The findings of the speculum and bimanual pelvic examination were suggestive of cervical cancer in 96% of patients, which was confirmed by histology.

The clinical stages at EUA and biopsy are summarised in Table 4. Advanced-stage cancer (stage 2b and above) was seen in 93.4% of patients. Those with stage 1B disease had radical abdominal hysterectomy, whereas those with stage 2A disease and above were referred to other centres for radiotherapy. All cases were squamous cell carcinoma.

DISCUSSION

The prevalence of cervical cancer in this study, which was 35.3 per 1,000 women, is similar to values recorded in related studies in Nigeria and India.[6,7] However, it was higher than the prevalence rate from studies in U.S.A., Spain and Argentina.[5,7,8] This higher rate in our study could be

Table 1: Age and parity distribution

Age (years)	Frequency	Percentage
20-29	2	2.6
30-39	1	1.3
40-49	21	28.1
50-59	30	40
60-69	18	24.1
>70	3	3.9
Parity	Frequency	Percentage
1	5	6.7
3-4	17	22.6
>5	53	70.7

Table 2: The risk factors associated with cervical cancer

Risk factors	Frequency	Percentage
High parity	70	93.3
Early coitarche	59	78.7
Low socioeconomic status	53	70.7
Multiple sexual partners	49	65.3
Oral contraceptive pills	32	42.7
Immune-compromising illnesses	11	14.7

Table 3: Clinical features in patients with cervical cancer

Symptoms/signs	Frequency	Percentage
Vaginal bleeding	75	100.0
Pelvic pain	63	84.0
Vaginal discharge	57	76.0
Weight loss	43	57.3
Positive speculum/bimanual pelvic examination	72	96.0

Table 4: Clinical stages of patients with cervical cancer in UPTH

Stage	Frequency	Percentage
1B	4	5.3
2A	1	1.3
2B	19	25.3
3A	17	22.7
3B	14	18.7
4	20	26.7

attributed to paucity of adequate health screening and prevention programmes compared with lower values recorded in developed countries. Also, the fact that the hospital serves as a major referral health centre for complicated gynaecological cases in Port Harcourt and environs, translates to a higher burden of the disease. The mean age recorded was 53.5 years (±9.3), with peak age prevalence among the age group of 50-59 years. Those aged <40 years accounted for only 3.9% of patients. These findings tend to conform to similar studies in Abuja, Ibadan and China.[1,9,18] This predilection for middle-aged and elderly women increases the morbidity and mortality from cervical cancer, especially when co-existing with other co-morbidities associated with the elderly population. As such, screening programmes should be targeted at women of reproductive age with the aim of detecting pre-invasive stages of the disease, which could be easily treated.

High parity (Para 3 and above) was the commonest risk factor identified in this study, followed by early coitarche (before 18 years), low socioeconomic status, multiple sexual partners and use of oral contraceptive pills. This was similar to the results of WHO studies done in other developing countries.[7,8] Cancer of the cervix is commoner in parous women, and this study showed that 93.3% of the patients were multiparous women. Human immune-deficiency virus was found in 9.3% of patients in this study, which was comparable with the results of a study conducted in Abuja.[19] However, it was at variance with reports from similar studies in South Africa, Uganda and Kenya where higher prevalence of HIV were reported.[20-22] The higher prevalence reported in other studies may be partly explained by case selection and by differences in the sexual practices of the women studied.[19] Poverty plays a key role in the aetiology of this disease in our environment, as it predisposes to early sexual exposure, early marriage and multiple sexual partners, as well as exposure to sexually transmitted diseases like human papilloma virus (HPV) and HIV. Although HPV infection with oncogenic strains is necessary for the development of cervical cancer, with> 70% of the cervical cancers attributed to serotypes 16/18, our study could not ascertain the HPV infection status of the patients because of the lack of facilities to determine the HPV serotypes.[1] Despite the availability of a Pap smear testing unit and other screening modalities in the facility, 68% of our patients in the study were unaware of its existence. The degree of awareness of the availability of cervical cancer screening modalities did not, however, translate to its use in this study because only 4.2% of those that were aware had previously used any form of screening. It is, therefore, imperative that health institutions should improve on public awareness regarding cervical cancer screening facilities. In addition, governments should alleviate poverty to truncate the vicious cycle of poverty, predisposition to early sexual exposure and multiple sexual partners, which were all identified as risk factors in this study.

The commonest presenting symptoms in this study were vaginal bleeding, pelvic pain, vaginal discharge and weight loss. The major clinical findings were pallor, cachexia and speculum examination findings suggestive of cervical cancer. These were similar to studies conducted in Abuja and Ibadan.[19,23] However, there has been a temporal change in developed countries where more women present asymptomatically because of the widespread use of cervical screening methods and the higher level of health awareness and education in such societies.[15,24] None of the patients in our study had an asymptomatic presentation. This demonstrated the general low level of

awareness about cervical cancer screening programmes and presumed apathy by many women to utilize such services. In making a diagnosis of cervical cancer in this study, EUA and cervical biopsy were carried out. Most of the patients (93.4%) in our study presented with advanced-stage disease. This result was similar to trends noticed in studies in Abuja, Ibadan and China.[1,18,23] The finding that in 96% of the patients who had speculum and bimanual examinations a diagnosis of cervical cancer was possible gives credence to the fact that a simple speculum examination in low resource setting, if incorporated as routine in screening protocol, may assist in curbing the scourge of the disease and awaking the dormant need for a quest to probe any identified pathology.

CONCLUSION

Cervical cancer in our environment is a debilitating illness seen to affect mainly elderly women. Late presentation is still the norm, as majority of the patients presented with advanced disease at the time of diagnosis. Use of preventive and screening modalities is still grossly inadequate. There is an urgent need to intensify awareness of the importance of HPV vaccines and other modalities of prevention of cervical cancer to reduce the cancer burden.

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