Clinico-pathological analysis of cervical cancer in Gombe, North East Nigeria; a ten year retrospective study

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Abstract
Objective: *To determine the pattern of clinical presentations of cases of clinically diagnosed cancer of the cervix at the Federal Teaching Hospital Gombe.*
Method: *It was a retrospective study over a ten year period.*
Results: *There were 8075 Gynaecological admissions in the study period and 302 were Gynaecological malignancies, 176 cases were identified but only 116 folders were available for review. Hence cervical cancer made up 0.022% and 58.3% of all Gynaecological admissions and Gynaecological Malignancy admissions respectively. The mean ages was 53.5years $\pm$11.8, the peak incidence occurring at age range of 41-50 years. The highest incidence occurs among those with parity 5 and above (105/90.5%). The commonest presentation was abnormal vaginal bleeding 100(86.2%). Most of the patients presented with advanced disease (FIGO Stage IIB-IV). Squamous cell carcinoma accounted for 105(90.5%).*
Conclusion: *The pattern of presentation and histology was in keeping with global findings.*
Keywords: *Cervical cancer, presentation, clinico-pathological.*

Introduction

Carcinoma of the cervix, a potentially preventable disease is the second most common malignancy in women worldwide and the leading cancer of women in developing countries[1].

Worldwide, there are an estimated 528,000 new cases of cervical cancer and 266,000 deaths per year [2]. About 85% of cancer and 80% of deaths from cervical cancer occur in developing countries[2] while the incidence has reduced significantly in developed countries due to widespread utilization of cervical screening Programme[3,4].

In the early stage of the disease, the patients may be asymptomatic or present with bleeding which may take the form of postcoital bleeding, irregular vaginal bleeding of intermenstrual, perimenopausal or postmenopausal bleeding. This may be associated with watery, bloodstained and offensive vaginal discharge[1]. Advanced cancer can be complicated by haemorrhage, pyometra, vesico-vaginal fistula, recto-vaginal fistula and

oliguria/anuria from blockage of the ureters[1,5]. Uraemia and torrential haemorrhage from the tumours are the commonest causes of death[1,5]. Cervical cancer mortality is about 40% higher in black women younger than 65 years than in white women of the same age[6]. Among women older than 65 years, the mortality for black women is more than 150% higher than for white women[6].

Studies in developing countries have shown that most patients present in late stages(IIB-IVB) of the disease[7-10]. At this stage of the disease, most patients cannot be cured and the best that can be offered is palliative radiotherapy and this is not readily available in most centres in developing countries[11]. This is in sharp contrast to situation in developed countries where majority of patients present in early stages (I-IIA) of disease[12,13].

Examination under anaesthesia (EUA) is mandatory for suspected cases of cervical carcinoma. It is used to determine the extent and stage of the disease, and to confirm the diagnosis through histological examination of biopsy specimen. It also affords the choice of an appropriate treatment modality and prognosis of the disease. Also, outcome of treatment of the various stages of the disease can be compared worldwide. EUA involves thorough visual inspection of the cervix, vagina and bimanual examination for the size and mobility of the uterus and parametria. Rectal examination may detect the involvement of the pelvic side wall and uterosacral ligaments. Cystoscopy and proctoscopy will confirm the presence and extent of the bladder and rectal involvement respectively. Other modalities for staging are Computed tomography (CT) and Magnetic resonance imaging (MRI)[14] though not readily available in West African Sub-region. Ho et al reported that the overall accuracy of MRI in staging carcinoma of cervix is estimated at 75% compared to 55% and 32% for EUA and CT staging [14] respectively. The accuracy of these modalities for parametrial status is estimated at 90% for MRI, 82.5% for EUA and 55% for CT [14]. The management protocol was significantly altered in about 86.9%

of patients with additional MRI findings in another study [15].

Squamous cell carcinoma accounts for 85-90% of the tumours, adenocarcinoma accounts for 2-5% and rare histologic types such as clear cell, small cell, adenocystic, adenosquamous and glassy cell carcinoma have been reported [5]. In developed countries, there is increasing trend is adenocarcinoma in women 35 years or younger[16,17]. This is largely due to the addition of HPV DNA testing in the management algorithms[16,17].

The aim of the study was to review the results of patients who had examination under anaesthesia for invasive cervical cancer. The specific objectives were to; determine the sociodemographic characteristics of the patients; determine symptoms and the clinical stages at presentation; determine the histological types of the disease and the degree of differentiation.

Material and Methods

This was a 10-year retrospective study of patients who had examination under anaesthesia for cervical cancer between 1st January, 2010 and 31st December, 2019 at Federal Teaching Hospital Gombe, Nigeria.

There were 176 cervical cancers managed during the study period. Only 116 folders were available for analysis giving a retrieval rate of 65.9%.

Data such as age, parity, educational level, and marital status, awareness of cervical cancer screening, symptoms, and duration of symptoms, stage, histological type and degree of differentiation were extracted and entered into SPSS version 21.0 spreadsheet. Data were analyzed using mean, range, standard deviation, frequencies and percentages.

Clinical staging (FIGO staging) for suspected cases of cervical cancer was performed under anaesthesia by resident doctors and consultants. It involves clinical assessment of the cervix, vagina, parametrium, bladder and rectal involvement. However, cystoscopy and proctoscopy were not done.

Biopsy specimen is processed at the pathology department of the hospital. Most cases of histologically confirmed cancer were referred to Ahmadu Bello University, Teaching Hospital, Zaria. However, early stage diseases are being treated in our centre with a recently acquired brachytherapy facility.

Results

The mean age of the patients was 53.5years ±11.8years. In table I, the peak incidence occurred in age range of 41-50 years. It was also shown in table I that most of the patients were housewives 89(76.7%), married 90(77.6%) and had no formal education 103(88.8%).

Table I shows the incidence of the disease rises as parity increases with the highest incidence seen in grand multipara (para 5 and above) i.e. 105 (90.5%), while patients with parity less than 4 were few 11(9.5%).

Table I: Biosocial characteristics of women with cervical cancer

Variables	Frequency	%
Age distribution:		
21-30	5	4.3
31-40	15	12.9
41-50	34	29.3
51-60	28	24.1
61-70	25	21.6
>70	9	7.8
Marital Status:		
Single	3	2.6
Married	90	77.6
Widow	22	19.0
Divorced	1	0.9
Educational Status:		
None	103	88.8
Primary	2	1.7
Secondary	4	3.4
Tertiary	7	6.0
Occupation:		
Housewife	89	76.7
Trading	19	16.4
C/Servants	6	5.2
Others	2	1.7
Parity Distribution:		
0	1	0.9
1-2	3	2.6
3-4	7	6.0
≥5	95	81.9

In table II, the commonest symptom at presentation was abnormal vaginal bleeding. This was seen in 100(86.2%) of patients and majority of patients 102(87.9) % had blood transfusion.

Most of the patients 99(85.3%) presented with advanced stage of the disease (stage IIb-IV) while few patients 17(14.7%) presented in early stage of the disease (I-IIa) as was shown in table II. It was also shown in table II that majority of patients 95(81.9%) presented after three months of the onset of symptoms.

Table II: Clinical presentation of patient with cervical cancer

Variables	Frequency	%
Symptoms*:		
Irregular vaginal bleeding	100	86.2
Vaginal discharge	78	67.2
Postcoital bleeding	17	14.7
VVF	7	6.0
RVF	1	0.9
Duration of symptoms:		
< 3 months	21	18.1
3-6 months	36	31.0
6-9 months	26	22.4
>9 months	33	28.4
Blood transfusion:		
Yes	102	87.9
No	14	12.1
Clinical stage by EUA:		
Ib	7	6.0
IIa	10	8.6
IIb	15	12.9
IIIa	31	26.7
IIIb	37	31.9
IVa	13	11.2
IVb	3	2.6

*Some patients had multiple symptoms

From table III, squamous cell carcinoma was the commonest histologic type. This accounted for 105(90.5%) of the cancer. There was one case each of clear cell and small cell carcinoma respectively. Majority of the cancers (46%) were poorly differentiated.

Table III: Histologic types and degree of differentiation of the tumours

Variables	Frequency	%
Histologic types:		
Squamous cell carcinoma	105	90.5
Adenocarcinoma	6	5.9
Adenosquamous carcinoma	3	3.5
Clear cell carcinoma	1	0.9
Small cell carcinoma	1	0.9
Degree of differentiation:		
Well differentiated	21	18.1
Moderately differentiated	29	25.0
Poorly differentiated	46	39.7
Unspecified differentiation	20	17.2

Discussion

The mean age of 53.5 years in this study is similar to other studies in Nigeria[8, 18, 19].

As many as 58.8% had no formal education: it cannot be certain if this reflects the level of education related to cancer of the cervix or it was just the level of education among the study population.

The commonest symptoms at presentation in this study was irregular vaginal bleeding (86.2%). Others were vaginal discharge (67.2%); post coital bleeding (14.7%) vesico-vaginal fistula (6.0%). Many patient presents with a combination of symptoms. Medical record system in Nigeria is poor. Due to poor screening system in Nigeria majority of cases present late as these symptoms suggest late presentation.

Most of the women were unemployed housewives which may suggest lower socio economic class. It may therefore be safe to assume that cultural and financial factors may have contributed to the late presentation with antecedent challenges of care at this late stage[20]. Majority of the women, 81.9% were of parity of 5 and above this agrees with the known relationship between cervical cancer and multiparty and other studies[8, 18, 20].

The actual demonstration of how bad situation is, is the finding of 85.3% presented with a late stage disease (Stage IIB-IV). Similar situation exist in Nigeria and world over[8, 18, 20].

Squamous cell carcinoma is the dominant histological type constituting up to 90.5% having similar world patterns[22]. This is followed by Adenocarcinoma (5.9%). 39.7% were poorly differentiated, Udigwe et al at Nnewi[18] found the small cell non Keratinizing variety to be more common.

All our cases were referred to Ahmadu Bello University Teaching Hospital for Radiotherapy due to lack of such at our centre and are usually cost to follow-up.

Conclusion

The presentation of cancer of the cervix at our centre follows similar trends in the developing countries. Lack of radiotherapy presents a major obstacle in managing these patient. But better still, there is a need to increase uptake of screening services to reduce the number of cases that require radiotherapy

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