EVALUATION OF HISTOLOGICALLY CONFIRMED CARCINOMA OF THE CERVIX IN NNEWI NIGERIA: A five year review.

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ABSTRACT

BACKGROUND:
Cervical cancer is the commonest gynaecological cancer in developing countries. It is a major cause of cancer related deaths among women in our subregion.

OBJECTIVE:
To determine the incidence, mode of presentation, associated risk factors and management of histologically confirmed carcinoma of the cervix at the Nnamdi Azikiwe University Teaching Hospital, Nnewi.

METHOD:
This was a retrospective study of all the cases of histologically confirmed carcinoma of the cervix at the Nnamdi Azikwe University Teaching Hospital, Nnewi, between first of August 2009 and 31st July 2014. Data collected was analysed with SPSS version 20.0 software and presented in tables and charts.

RESULTS:
Sixty two patients with histological confirmation of cervical cancer were managed in the hospital over a five year period. Forty five of these patients with adequate information in their folders constitute the study group. There was an incidence of 9.2% of all gynaecological admissions. The highest incidence (31.2%) was found in age group 50-59 years.
The commonest presenting symptom was bleeding per vaginam in 95.6% of the patients. Majority of the patients already had advanced stage (IIb and above) disease at presentation (77.8%). The commonest histological type of cervical cancer was squamous cell carcinoma accounting for 88.9%. Twenty (44.4%) patients were referred for radiotherapy and many of the patients (33.4%) were lost to follow up.

CONCLUSION:
The incidence of cervical cancer is very high in our environment. Majority of the presentations were at the advanced stage of the disease.

INTRODUCTION

Cancer of the cervix uteri is the most common female cancer in developing countries[1]. Worldwide, about 500,000 women acquire the disease annually and about 75% are from developing countries[1]. About 300,000 women die of the disease annually[1].

In the United States of America in 2014, there were estimated to be 12,360 new cases of invasive cervical cancer, and 4,020 cancer related deaths were expected[2]. This represented approximately I percent of cancer deaths in women[2].

One of the most significant clinical findings of recent years is that many younger women than ever before are afflicted with cervical dysplasia and carcinoma. Additionally, the mean age of women diagnosed with and dying from cervical carcinomas appears to be decreasing. Cervical intraepithelial neoplasia is most commonly detected in women in their 20s, the peak age incidence of carcinoma in situ is in women aged 25-35 years, whereas the incidence of cervical cancer rises most significantly after the age of 40 years[3].

Cancer of the cervix can be squamous, or glandular in origin, leading to squamous, adenosquamous or adenocarcinomatous variants of the disease. Approximately 70-75% of cervical carcinomas are

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squamous cell; the remainder are composed of various types of adenocarcinomas (20-25%), adenosquamous carcinomas (3-5%), and undifferentiated carcinomas[3].

Strong risk factors for cervical cancer and its precursor have been identified and include; multiple sexual partners, early onset of sexual activity, a high risk sexual partner (history of multiple sexual partners, human papillomavirus(HPV) infection, lower genital tract neoplasia,or prior sexual exposure to someone with cervical neoplasia), a history of sexually transmitted infections, as well as cigarette smoking, human immunodeficiency virus (HIV) infection, acquired immune deficiency syndrome (AIDS), other forms of immunosuppression, multiparty, and long term oral contraceptive pill use[1,3].

Some experimental evidence also points to deficiency of micronutrients particularly vitamins A,C and E, folate and carotenes as possible risk factors for the development of cervical carcinoma[4].

Patients with cervical cancer may be asymptomatic or commonly present with either intermenstrual bleeding or postmenopausal bleeding[1]. In addition, patients often complain of a profuse, offensive watery vaginal discharge, which may be bloodstained. Other symptoms such as pain are uncommon until the very late stages[1]. Clinical findings on examination such as pallor and wasting may or may not be present depending on the severity of the disease. Examinations of the cervix will reveal either a nodule or small ulcer, which often bleeds on contact. As it advances, the lesion becomes a crater shaped ulcer or often a friable warty looking mass[5].

The survival of women with cervical cancer is related to the stage of the disease, the method of treatment chosen, and the experience of the radiotherapist or surgeon. The 5-year relative survival rate for all women treated for invasive cervical cancer in UK is 5%[5].

The aim of this study was to review histologically confirmed cases of carcinoma of the cervix with a view to documenting the incidence, presentations and factors influencing its management so as to suggest ways of improving on the present level of care.

MATERIALS AND METHOD
The study group consisted of patients who were admitted into the gynaecological ward of the Nnamdi Azikiwe University Teaching Hospital between first of August 2009 and 31st July 2014, with cervical cancer and who had histological confirmation of the disease. Sixty two patients were seen. Of these, 45 case files had adequate information for analysis with respect to age, parity, number of sexual partners, duration of disease,

stage of disease, clinical presentation and management. They form the subject of this review.

Data collected was analysed with SPSS version 20.0 software and presented in tables and charts.

RESULTS
During the study period, 673 patients were admitted into the gynecological ward of the Nnamdi Azikiwe University Teaching Hospital, Nnewi.Sixty two cases of cervical cancer were diagnosed by histology of cervical biopsy tissue specimen. The overall incidence of confirmed cervical cancer in this study was 9.2% of all gynaecological admissions.

In the age distribution of the patients, the highest incidence was found in one decade, 50-59 years accounting for 31.2% of the patients (table 1). One of the patients was below 30 years of age. Thirty six (80.0%) of the patients were grandmultiparous, 17.8% were multiparous while only 1(2.2%) was nulliparous (table 2).

Twenty nine (64.4%) of the patients had more than one sexual partner who had no other sexual partners (table 3). In the clinical features, 95.6% of the patients complained of one form of bleeding or the other (intermenstrual, post coital and/or post menopausal), and 68.9% had history of vaginal discharge. Most of the cervical lesions were ulcerative in nature (68.9%) while 57.8% had exophytic, fungating or friable lesion (table 4).

Majority of the patients (35.6%) presented with symptoms, which had been present for 7 months or more (table 5). Only 3 patients (6.7%) had symptoms of less than 1 month and 2 patients (4.4%) had no symptoms. One was diagnosed on histology of specimen of total abdominal hysterectomy done for uterine fibroids and the other came for routine pap smear and was found to have invasive cancer.

Stage III B carcinoma was the most common diagnosis (31. 1%), followed by Stage III A(24.4%). Squamous carcinoma is the most common histological type accounting for 88.9% followed by adenocarcinoma (6.7%) and adenosquamous carcinoma (4.4%)(figure 1). Carcinoma in situ was found in 1 patient (2.2%) .

The two patients (4.4%) that had carcinoma in situ and stage 1 carcinoma were treated with total abdominal hysterectomy while the remainder of the patients 43(95.6%) were either referred for radiotherapy or were treated palliatively/lost to follow up(figure 2). The survival rates for the patients could not be ascertained because many of the patients were lost to follow up.

TABLE 1: AGE DISTRIBUTION OF PATIENTS N=45

Age (years)	Frequency	Percentage
20-29	1	2.2
3o-39	4	8.9
40-49	10	22.2
50-59	14	31.2
60-69	11	24.4
70-79	4	8.9
=80	1	2.2

TABLE 2: PARITY DISTRIBUTION OF PATIENTS N=45

Parity	Frequency	Percentage
0	1	2.2
1-4	8	17.8
=5	36	80.0

TABLE 3: DISTRIBUTION OF PARTNER AND/OR SEXUAL PARTNER WITH MORE THAN ONE PARTNER N=45

Sexual partner	Frequency	Percentage
1 sexual partner	16	35.6
>1 sexual partner and or Sexual partners with more than one partner	29	64.4

TABLE 4: CLINICAL PRESENTATION OF CERVICAL CANCER

Symptoms and signs	Frequency	Percentage
Vaginal Bleeding	43	95.6
Vaginal discharge	31	68.9
Abdominal pain	21	46.7
Weight loss	21	46.7
Urinary symptoms	17	37.8
Ulcerative lesion	31	68.9
Exophytic/ hard and Craggy/fungating friable lesion	26	57.8

TABLE 5: Duration of illness N=45

Duration	Frequency	Percentage
< 1 month	3	6.7
1-3 months	11	24.4
4-6 months	9	20.0
7-12 month	16	35.6
>1 year	4	8.9
Asymptomatic	2	4.4

Figure 1: Histological types

- Large cell keratinizing squamous carcinoma
- Large non cell keratinizing squamous carcinoma
- Small cell non keratinising squamous carcinoma
- Adenosquamous carcinoma
- Adenocarcinoma

Figure 2: Modalities of treatment

- Surgical treatment
- Referral for radiotherapy
- Palliative treatment
- Lost to follow-up
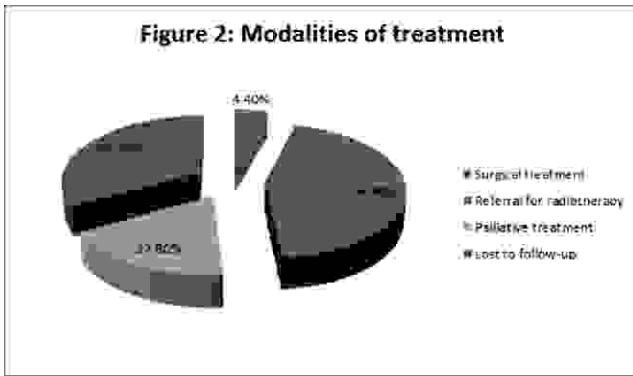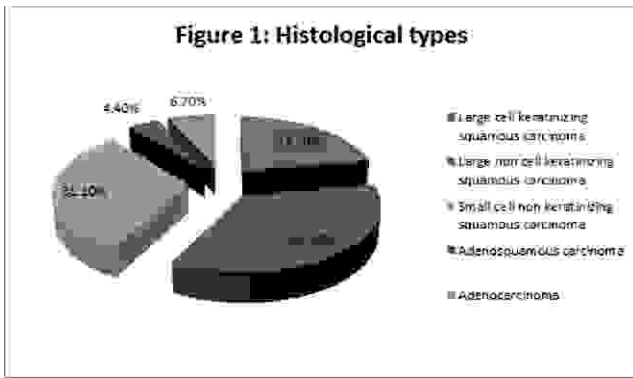
DISCUSSION

The incidence of cervical cancer in this study was 9.2% of all gynaecological admissions. This is higher than another hospital based study in Ilorin, Nigeria, which was 2.6%[7]. In this study, cervical cancer occurred more often in one age group or decade of life, 50-59 years with an incidence of 31.2%. This is similar to other hospital based studies, which were 51-60 years [13,14].

Two peaks of around 35 years and 50-55 years have been reported in the literature[8]. The higher peak of age incidence in our community may be due to the fact that most of the patients do not undergo screening at an early age. They present only when the condition has become full blown and advanced and also because younger women might have been treated by herbalists or not present at all for treatment.

Majority of the patients (80.0%) were grand multiparous while only 1(2.2%) was a nulliparous. This agrees with what obtains in other studies[7,9,10]. It has been explained that the association between cervical cancer and bearing of children, is not accounted for by cervical injury or infection during labour but by the sexual intercourse, which result in the pregnancies. High parity usually means frequent coitus during many years, starting at a young age [1] and therefore worsens the tendencies when there is exposure to sexually

transmitted infections, which can persist because of re-infection from one wife to the other. Poor socioeconomic condition, which usually accompanies high parity, is a recognized risk factor for cervical cancer[1].

Multiple sexual partners or having partners who have sex with other women are recognized risk factors for the development of cervical cancer [1,3]. Majority (64.4%) of the patients reviewed had multiple sexual partners or were married into polygamous homes. Documentary evidence of past history of sexually transmitted infections were not available.

In the majority of cases (88.9%), symptoms have been present for 4 weeks or longer. Late presentation is a common feature of cervical cancer in developing countries, where women are ignorant of the disease and its symptoms, where adverse socioeconomic factors prevent them from presenting earlier for treatment and where nutrition deficient in micronutrients are the order of the day [11].

Abnormal vaginal bleeding and/or vaginal discharge were the most frequently reported symptoms in this study. This agrees fully with documentations in the literature [9,11,12]. Vaginal bleeding comes by surface ulceration of the growth, while vaginal discharge is caused by necrosis and attendant infection of necrotic tissue with saprophytes. An obvious cervical growth was present in the majority (57.8%) of the patients due to late and advanced presentation of the disease. In a study in Kumasi, Ghana, an obvious cervical growth was observed in 58.6% of the patients[11]. It is important to note that bleeding is usually caused by contact, and most women at the age they present are usually not sexually active and therefore would only bleed when ulceration occurs.

Majority of the patients (77.8%) presented with stage IIB disease and above, hence, they had a poor prognosis at presentation. Advanced stage of disease at presentation is a direct result of late presentation as already outlined. Eighty nine percent (89%) of patients presented in advanced stages of the disease in a similar study in Sokoto [12].

The commonest histological type of cervical cancer in this study was squamous carcinoma, accounting for 88.9% while 6.7% were adenocercinomas, and 4.4% were adenosquamous carcinomas. This agreed with literatures where about 85-90% is attributed to squamous type and 10-15% to adenosquamous[1].

Only two (4.4%) had surgical treatment for carcinoma in situ and stage 1 disease. They both had good outcome. Up to 44.4% were refered for radiotherapy. Many of the patients were lost to follow up because of

213

hopelessness on their part. This hopelessness results from the fact that these patients may not be able to afford the cost of radiotherapy and the belief that cancer diagnosis is synonymous to death sentence.

Therefore, this condition is better prevented in our subregion using a wellstructured screening program for the premalignant lesion of the cervix. However, the knowledge and practice of cervical smear is still very poor even among the health workers in our subregion[15].

In conclusion, this study has shown a high incidence of cervical cancer in our subregion. All women, once they start having sexual intercourse, should be encouraged to have regular pap smear to detect the premalignant states of this disease. Radiotherapy facilities to treat these patients are also needed in more centers in Nigeria. The institution should invest in the new screening test called human papillomavirus testing recommended as secondary test following an abnormal or equivocal low grade screening cytology result.

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214