

A Five Year Review of Cervical Cytology in Abakaliki, Nigeria

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Abstract Background: Cervical cancer is the commonest gynecological cancer in Nigeria. The risk factors to cervical cancer are common in our environment. **Objective:** To determine the prevalence of cervical squamous cell abnormalities and the risk factors associated with the disease in Abakaliki, Nigeria. **Methods:** A 5 year retrospective study of cervical cytology at the Federal Teaching Hospital, Abakaliki from 1st January 2008 to 31st December 2012, was undertaken. **Results:** The prevalence of cervical squamous cell abnormalities in this study was 11.2%. These cervical squamous cell abnormalities comprised ASC-US (0.6%), LSIL (3.9%) and HSIL (6.7%). Cervical squamous cell abnormalities were significantly commoner among clients who were smokers, live in rural areas, had high parity and history of vaginal discharge/itching. However, age at coitarche, educational qualification and use of hormonal contraceptives did not have any effect on cervical squamous cell abnormality in this study. **Conclusion:** There is high prevalence of cervical squamous cell abnormality in Abakaliki. So there is need for public sensitization about this problem and the various ways of stemming the tide.

Keywords: cervical Cancer, cervical cytology, risk factors, Abakaliki

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1. Introduction

Cervical cancer is the most common female genital cancer in the developing countries. [1] About 60-75% of women in sub-Saharan Africa who develop cervical cancer live in rural areas and mortality is very high. [2,3] The age standardized incident rate of cervical cancer per 100,000 women in Africa is 29.3 compared to 11.9 in Europe and 7.7 in North America. [4,5] In Nigeria, cervical cancer is the most common gynaecological cancer. [6] About 47.72 million Nigerian women are at risk of cervical cancer and the crude incidence per 100,000 population is 17.1 while the age-standardized incidence per 100,000 population is 29.0. [5] The annual number of cervical cancer cases in Nigeria is 14,089 and the annual number of cervical cancer death is 8240. [5] The incidence of cervical cancer is low in the developed world because of adequate screening procedures. [7] Documented risk factors for cervical cancer include early coitache, high parity, multiple sexual partners, sexually transmitted infections especially with oncogenic strains of human papilloma viruses and smoking. It has also been reported that the disease is commoner among patients with HIV/AIDS, long term use of oral contraceptive pills and low socio economic status [1,6,8].

Screening for cervical cancer is very important in order to detect a pre-clinical phase or early stages of a disease for the purpose of identifying those likely or unlikely to have a disease. Screening also improves the prognosis for treated cases, reduces morbidity after treatment of screen detected cases, reassured those with negative tests and also is cost effective in terms of use of health care resources. Papanicolaou (Pap) smear test is a simple and cheap screening test that is fairly well tolerated by patients, easy to administer and has reasonable sensitivity and specificity. The suitability of cervical cancer for screening is because of its gradual development from its precursor lesions. [9] The Pap smear test has been used globally in the diagnosis of pre-malignant and malignant lesions of the cervix. [10] It is a secondary prevention method, aimed at identifying the premalignant and malignant lesions that may need follow-up and/or treatment. Unfortunately, there is low level of awareness on cervical cancer and cervical cancer screening services in developing countries. [12,13,14] The prevalence of cervical epithelial abnormalities of 7.6-16.2% have been reported in Southern Nigeria. [15,16,17,18] In Northern Nigeria, a prevalence of 6.8-16.1% have been reported. [19,20,21] However, prevalence of 1.28% and 2.8% were reported in Iraq and Turkey respectively [22,23].

Abakaliki is the capital of Ebonyi State, South-East Nigeria. The state is dominated by poor people and majority of the people reside in rural areas. There is a preponderance of early marriage, polygamy, teenage pregnancy, ignorance, poor health-seeking behavior and high parity in this environment. These are the predisposing factors to cervical cancer. [24] A medline literature search did not yield any previous study on the subject matter in this locality. Considering the contribution of PapSmear cytology on early detection and treatment of premalignant and malignant lesions of the cervix, a 5 year review of cervical cytology in Abakaliki, Nigeria, is very important. The findings from this study may help the policy makers and other stakeholders plan on how to remarkably reduce the high incidence of cervical cancer in this environment.

2. Materials and Methods

A 5 year retrospective study of cervical cytology at the Federal Teaching Hospital, Abakaliki was undertaken

from 1st January 2008 to 31st December 2012. The file numbers of the clients who had Pap smear screening were traced at the histopathology department, Well women center and gynecology clinic registers. Their case notes were thereafter retrieved from the Medical Records Department of the hospital. A proforma containing information on age, occupation, marital status, parity, age at coitarche, nature and number of marriages, previous history of vaginal discharge, smoking and previous history of use of oral contraceptives was used to extract information from the case notes. All of the Pap smear results were recorded and classified based on the 2001 Bethesda System of reporting Pap smear cytology. [25] The statistical analysis was done using the Statistical Package for Social Sciences version 17 software (SPSS Inc., Chicago IL, USA). The chi-square test was used for the discrete variables. P-value ≤ 0.05 was considered to be statistically significant.

3. Results

Table 1. Results of the Pap smear cytology

Results	N=536	%
Negative to Squamous Intraepithelial Lesion or Malignancy	469	87.5
Inadequate sample	7	1.3
Atypical Squamous Cells of undetermined significance	3	0.6
Low grade squamous intraepithelial lesion	21	3.9
High grade squamous intraepithelial lesion	36	6.7

Table 2. The effect of socio-demographic characteristics on cervical epithelial abnormalities

Socio-demographic characteristics	N=536 Positive (%)	Negative (%)	P-value
Age at coitarche			
<20 years	53(9.9)	439(81.9)	0.43
≥ 20 years	7(1.3)	37(6.9)	
Parity			
≤ 1	5(0.9)	108(20.1)	0.02*
≥ 2	55(10.3)	368(68.7)	
Address			
Rural	23(4.3)	90(16.8)	0.0009*
Urban	37(6.9)	386(72)	
Educational Qualification			
\leq Primary	15(2.8)	154(28.7)	0.31
\geq Secondary	45(8.4)	322(60.1)	
Sexual partners			
Single	32(6.0)	387(72.2)	<0.0001*
Multiple	28(5.2)	89(16.6)	
Smoking			
Yes	10(1.9)	17(3.2)	<0.0001*
No	50(9.3)	459(85.6)	
Use of hormonal contraceptives			
Yes	12(2.2)	123(22.9)	0.41
No	48(9.0)	353(65.9)	
Previous history of vaginal discharge/itching			
Yes	41(7.6)	199(37.1)	0.0002*
No	19(3.5)	277(51.7)	

*=Statistically significant.

A total of 536 clients' Pap smear results were retrieved out of 740, giving a retrieval rate of 72.43%. The mean age of the clients was 28.6 years and their ages ranged from 17 to 69 years. Table 1 shows the results of the Pap smear cytology of the clients. A total of 60 clients had cervical squamous cell abnormalities thereby giving a prevalence of 11.2%. Further evaluation showed that 3 (0.6%), 21 (3.9%) and 36 (6.7%) of the clients had Atypical Squamous Cells of Undetermined Significance (ASC-US), Low grade Squamous Intraepithelial Lesion (LSIL) and High grade Squamous Intraepithelial Lesion (HSIL) respectively. Out of the 87.5% of the clients that

had Negative to Squamous Intraepithelial Lesion or Malignancy, 20.4% were inflammatory cells.

Table 2 shows the effect of the socio-demographic characteristics on the cervical squamous cell abnormalities. Clients, who were rural dwellers, smokers, had multiple sexual partners, high parity and history of abnormal vaginal discharge/itching, were more likely to have cervical squamous cell abnormality. However age at coitarche, educational qualification and use of hormonal contraceptives did not have any statistically significant effect on the development of cervical squamous cell abnormality by the clients.

4. Discussion

The principal findings from this study showed that the prevalence of cervical squamous cell abnormalities was 11.2%. These cervical squamous cell abnormalities comprised ASC-US (0.6%), LSIL (3.9%) and HSIL (6.7%). Cervical squamous cell abnormalities were significantly commoner among clients who were smokers, lived in rural areas, had high parity and history of vaginal discharge/itching. However, age at coitarche, educational qualification and use of hormonal contraceptives did not have any effect on cervical squamous cell abnormality in this study.

The 11.2% prevalence of cervical squamous cell abnormality recorded in this study is similar to the values previously reported in Enugu and Kano but lower than the values reported in Benin and Jalingo. [15,16,20,21] It was however higher than the previous reports from Lagos, Ibadan, Middle East and the developed countries. [17,18,22,26] The high prevalence of cervical squamous cell abnormalities reported in this study may be due to the poor knowledge of the disease, high parity and low contraceptive prevalence in this environment. [13,14,27] The HSIL constituting majority of the cervical squamous cell abnormalities in this study is at variance with the reports from Benin, Jalingo and Turkey in which LSIL constitute the majority. [16,21,23] This high proportion of HSIL among the cervical squamous cell abnormalities in this study may be because of the preponderance of risk factors for cervical cancer and lack of organized cervical cancer screening program in our environment. More so, 20.4% of the clients who had inflammatory cells in this study is more than 14.6% reported in Benin. [16] Majority of the clients in this study who had their coitarche in the adolescent age agrees with a common cultural practice in Ebonyi State with the preponderance of early marriage, teenage pregnancy and high parity. However there is no significant association between early coitarche and cervical squamous cell abnormalities in this study which is contrary to the previous reports in Enugu and Zaria. [15,28] The significant association between the clients with cervical squamous cell abnormalities and history of high parity, multiple sexual partners, vaginal discharge and smoking in this study was similar to the previous reports in Zaria and South Africa. [28,29] However, this study did not observe statistically significant association between the use of hormonal contraceptives and abnormal cervical cytology which is contrary to the findings by Franceschi [30].

The limitation of this study is its retrospective hospital based design which may not be a true reflection of what is happening in the society.

In conclusion, there is a high prevalence of cervical squamous cell abnormalities in Abakaliki, Ebonyi State. The predisposing factors to HPV infection and cervical cancer are very common in this environment. There is an urgent need for community sensitization on how to prevent this problem. Also, there is need to provide free cervical cancer screening services and HPV vaccine for the adolescent girls in order to help stem the high trend of cervical cancer in our environment.

There was no competing interest among the authors.

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Competing Interest

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