ORIGINAL ARTICLE

Pattern of Pap Smear Results among Postnatal Clinic Attendees in Aminu Kano Teaching Hospital Kano: 2 Years Review.

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ABSTRACT

Background: Cancer of the cervix is second to the cancer of the breast and the two were responsible for three in ten of the cancers diagnosed in both sexes combined in 2020 in sub–Saharan Africa. The risk of a woman in sub-Saharan Africa developing cervical cancer is 3·5%. Cervical cancer is preventable with early detection and increased postpartum uptake may aid its early detection. **Method:** It was a retrospective cross-sectional study that involved women in the puerperal period who attended Post post-natal clinic at the Department of Obstetrics and Gynecology, AKT.H. between January 2020 to January 2021. Data was obtained with a proforma, analysed using SPSS version 23. Results were presented in tables, and summarized in terms of mean and standard deviation as well as frequency and percentages. A test of association was done using chi-square statistics. **Results:** Out of the 504 postpartum patients who had Pap smears, only 64% of the folders were available for analysis. The mean age was 36.7±6.4 and most of the respondents were multiparous 275 (84.9%). Majority of the women were married 322 (99.4%), 45.4% had secondary education as their highest level of education and 32.7% had tertiary education. The result of the Pap smear cytology was abnormal in 2.1% and LSIL is the commonest abnormality 5 (1.5%) **Conclusion:** The uptake rate of Pap smears was low (11.8%), and abnormal pap smears accounted for 2.1%. Pap smear abnormalities were commonest among those aged 19 to 39 years and those who were multiparous.

Keywords: Pap smear, Post natal clinic

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Introduction

Cancer of the cervix (23·3%) is second to the cancer of the breast (27·3%) and the two were responsible for three in ten of the cancers diagnosed in both sexes combined in 2020 worldwide. The risk of a woman in sub-Saharan Africa developing cervical cancer is 3·5%[1]. In Nigeria, cervical cancer is the most common gynaecological malignancy. Most cases of cervical cancer occur in less developed countries where no effective screening systems are available and patients present to the hospital when they can be offered only palliative care[2].

Cervical cancer is a slow-growing cancerous disease that generally takes several years to undergo a malignant transformation from primary infection by the oncogenic human papillomavirus (HPV) to the various precancerous lesions[3].

Pre-invasive cervical lesions are precursor lesions for cervical carcinoma. They are abnormal cellular changes located around the cervix that start in the cells on the surface of the cervix near the squamocolumnar junction (SCJ)[4].

The prevalence of pre-malignant lesions in the USA was 11.1%[5], in Ethiopia 13.4% [6], and in India 3.5% [7]. Another study conducted in Abakaliki, Southern

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Nigeria reported a prevalence of 6.3%[4], 3% in Calabar,[8] 30.5% in Jos[9], and 4.8% in Zaria[10].

Risk factors of cervical cancer include HPV infection, old age, early marriage, multiple sexual partners, sexually transmitted diseases, multiparty, use of oral contraception pills, smoking, and low socioeconomic status[11].

The cellular changes around the cervix near the squamocolumnar junction are called dysplasia. Pre-malignant lesions histologically are graded into cervical Intraepithelial Neoplasia 1, 2, 3 (CIN1, CIN2, CIN3) and cytologically into mild, moderate and severe dysplasia.[12] However, using Bethesda criteria they are classified as LSIL, HSIL, ASCUS and AGUS[12].

Screening tests can help to detect cervical cancer and precancerous cells that may develop into cervical cancer. Most guidelines suggest beginning screening for cervical cancer and precancerous changes at the age of 21 years. Screening tests include; pap smear, HPV DNA testing, visual inspection with acetic acid (VIA), with lugol's iodine (VILI) and liquid based cytology[13].

Pap smear was developed by Georgios Papanicolaou in 1943, as a cytological evaluation of exfoliated cells from the transformation zone of the cervix. Later his findings became very useful in detecting pre-malignant and malignant lesions of the cervix[14]. The frequency of pap tests has been revised by the US Preventive Services Task Force to a pap test every 2 or 3 years for the average woman who has had 3 normal pap smears. The American College of Obstetrics and Gynaecologists (ACOG) recommends annual pap smear screening from 3 years after the start of sexual intercourse but not before the age of 21 years. For women aged 30 – 64 years, the frequency of screening may be reduced to every 2 – 3 years after 3 consecutive negative pap smears. Those exposed to diethylstilbesterol in utero should be screened annually. Women who are HIV positive should have cervical cytology testing twice in the year of diagnosis and thereafter annually.

Cervical cancer is more common in developing countries due to a lack of effective screening programs to detect pre-malignant lesions and treat them before they progress to invasive lesions. The aim of this study is to determine the pattern of cervical cytology findings among postnatal clinic attendees in AKTH. Opportunistic Pap smear screening is offered routinely during the 6 weeks follow-up of the post-natal clinic attendees at AKTH.

The objectives of this study is to determine the uptake rate of Pap smear cytology among postnatal clinic attendees in AKTH and to describe the pattern of Pap smear cytology findings among postnatal clinic attendees in AKTH.

Methods

This cross-sectional retrospective study was designed to archive data from women who attended postnatal clinics from January 2020 to December 2020 for their postnatal clinic 6-week follow-up visit. The case files of all the postpartum women who had pap smear done during their 6 weeks follow-up visit were retrieved from the medical record unit of the ANC clinic.. Data, including biodata, parity, and information regarding Pap smear results, were collected on a proforma.

The data obtained was analysed using SPSS version 23. The results presented as tables standard deviation as well as frequency and percentages were used to summarize indices. Test of association was done using chi-square statistics where a significant difference is considered at P value <= 0.05.

Results

A total of 504 postpartum clients had Pap smear within the study period out of 5,634 clients that attended the 6-week postpartum visit. This gives an uptake rate of 9%. Only 324 folders were retrieved and analysed giving a retrieval rate of 64%. The mean age was 31.7±6.4 and the modal age group was 30-39 years representing about 45.4% of the study population. Most respondents were multiparous 275 (84.9%) while 49 (15.1%) were primiparous. Majority of the women were married 322 (99.4%) whereas 2 (0.6%) were divorced. The highest level of education was secondary education (45.4%), 32.7% had a tertiary level of education and only 3.4% had no formal education.

Most of the women (90.1%) attained menarche between 9-14 years and only 9.9% had their menarche at the age of 15 years and above. Almost 100% of the patients never smoked and 98.8% were negative for HIV infection with 1.2% infected.

In this study, there are 3 abnormal results: Negative for intraepithelial lesion (73.8%), inflammatory (24.1%), and epithelial cell abnormality as LSIL (1.5%), HSIL (0.3%), and ASCUS (0.3%). In this study 30-39 year olds had more abnormal smears than the other age groups with ages less than or equal to 18 years not reporting any abnormal smear. Grand multiparous

constituted the largest number of abnormal smears (58.8%) followed by those with 2-4 children (34.1%).

Table 1: Socio-demographic data of the respondents

Variables	Frequency, n=324	Percentage (%)
Age (years)		
≤18	2	0.6
19 – 29	127	39.2
30 – 39	147	45.4
≥40	48	14.8
Mean ± SD = 36.4		
Parity		
1	49	15.1
2 – 4	184	56.8
≥5	91	28.1
Mean ± SD = 3.6 ± 2.2		
Marital status		
Married	322	99.4
Divorced	2	0.6
Educational status		
Primary	60	18.5
Secondary	147	45.4
Tertiary	106	32.7
No formal education	11	3.4

Table 2: Pattern of cervical cytology

Variables	Frequency n=324	Percentage (%)
Cytology result		
Normal	239	73.8
Inflammation	78	24.1
LSIL	5	1.5
HSIL	1	0.3
ASCUS	1	0.3

Table 3: Relationship between pap smear cytology outcome and age and parity

Variables	Cytology result		Total (%)	χ^2	p-value
	Normal (%)	Abnormal (%)			
Age (years)					
≤18	2 (0.8)	0 (0.0)	2 (0.6)	35.821	***<0.01**
19 – 29	109 (45.6)	18 (21.2)	127 (39.2)		
30 – 39	108 (45.2)	39 (45.9)	147 (45.4)		
≥40	20 (8.4)	28 (32.9)	48 (14.8)		
Parity					
Primipara	43 (18.0)	6 (7.1)	49 (15.1)	54.147	***<0.01**
Multipara	155 (64.9)	29 (34.1)	184 (56.8)		
Grandmultipara	41 (17.2)	50 (58.8)	91 (28.1)		

*Statistically significant

Discussion

In this study, the uptake of cervical cancer screening among postpartum patients was 11.18%, this is similar to 13.3% reported by Oluwale E.O in a study conducted in Lagos, Nigeria.[18] It is in contrast, however, with the 43.48%[19] reported in Cameroon by Layu D. et al and the 73.18%[20] reported in Spain by Silvia P. et al. The low uptake rate could be as a result of lack of awareness, level of education, and financial status of the people in this region. Insufficient emphasis on cervical cancer preventive services during ANC health talk may also play a role.

The pap smear result of 324 postpartum women (2.1%) had abnormal cervical cytology, 1.5% were LSIL, 0.3% were HSIL and 0.3% were ASCUS. Negative smears were seen in 73.8%. Inflammatory conditions which are technically negative smears made up the remaining 24.1%. This is consistent with the report in previous studies conducted in Nigeria[4,22] and India[1]. This is in contrast with the findings of previous studies reported by Saeaib N. et al[23] and Ago BU et al[8]. This further emphasised the importance of screening for premalignant lesions of the cervix and prompt treatment to avoid progression into frank malignancy. Postpartum screening offered a unique opportunity for screening for premalignant lesions. With regards to parity and age, there was a statistically significant association between cervical cytology results, high parity and advanced maternal age ($P < 0.01$). The highest age range associated with abnormal pap smear and parity was 30-39 years, and this was statistically significant. This is in line with the study conducted in southeast Nigeria.[4] Majority of the women were married and had secondary education as their highest level of education. This is similar to the study conducted in Ethiopia.[21]

Conclusion

The uptake rate of Pap smear among postpartum women who came for their 6 week follow-up was 11.8%. The Pap smear results showed inflammatory changes in 24.1% and the most common abnormality in the Pap smear result was LSIL (1.5%). However, abnormal cytology is commonest among multiparous and those in the age group 19 to 39 years and this was statistically significance.

Recommendation

1. Proper documentation and storage of data to ease retrieval of information should be encouraged to increaese the availability of data which is a strong element in any scientific study.
2. Health education during antenatal and postnatal visits should emphasize cervical cancer screening in order to increase awareness of Pap smear.
3. There is a need for research on the perception of women on pap smear in the postnatal period to unveil deterrents to Pap smear uptake.

Conflict of interest; There is no conflict of interest with regard to any of the authors.

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