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Knowledge Level on Cervical Cancer amongst HIV positive women in Makueni County, Kenya

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ABSTRACT

Cancer of the cervix is a major cause of death in developing nations with low levels of screening uptake in Kenya. A descriptive study using interview administered questionnaire was used to determine the knowledge level on cervical cancer among 100 HIV/AIDS positive patients seeking care services at comprehensive care clinic (CCC) in Makueni county referral hospital. 97% of the respondents had heard about cancer of the cervix while barely 7% had been screened by papanicolaou (pap) smear. About 38% knew risk factors for cancer of the cervix with none mentioning HPV. 58% correctly mentioned ways of preventing it. Average knowledge level about cervical cancer was evident even though the HIV/AIDS positive women as risk population should be more informed.

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1.0. Introduction

Cancer of the cervix is one of the prevalent tumors in women globally. About 85% of these cancers are reported in the developing economies [7]. According to Ellerbrock et. al., high mortality rates occur in low income countries with higher prevalence in HIV infected women [3]. Human Papilloma Virus (HPV) has been documented as a causative agent for cervical cancer. This virus stays longer in HIV positive women thus increasing their risk of developing cancer of the cervix [3, 11]. Incidence of cervical lesions is more (4-5 times) among HIV infected women compared to those with negative HIV status [1, 2]. Infection with HIV causes immunosuppression which when compounded with HPV increases the risk of squamous intraepithelial lesions [9]. This together with other predisposing factors at play may trigger carcinogenesis leading to cervical pre-cancer lesions.

Cancer of the cervix is a common malignancy amongst women in Kenya with estimates of 4802 new cases and 2451 deaths per year [4]. Out of 20 cervical cancer high burden countries, Kenya ranks position 16 [4]. There is a notable number of people living with HIV in Kenya (1.5 million) [25), women being the most vulnerable group. A study done in Kenya by Menon et al., 2016 reports a high prevalence (61%) of high risk (Hr) HPV 16&18 which are major causes of cervical cancer [24].

Despite Highly active antiretroviral therapy (HAART) decreasing opportunistic infections among women living with HIV, cervical cancer is still significant in this group [10, 5]. Screening of these women for cancer of the cervix would be important since chances of them developing persistent HPV infections at an earlier age are higher. If not monitored early enough, premalignant lesions may progress to cancer faster. In Kenya though screening services are available, most women do not go for those services. One of the effective methods of screening cancer of the cervix is by pap smear test [17]. This technique identifies premalignant and malignant cells. If utilized earlier, mortality due to this disease can be reduced significantly.

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One of the most utilized screening procedure in CC clinics (for women living with HIV/AIDS) in Kenya is visual inspection of the cervix using acetic acid or lugol's iodine. Upon findings of positive results, those indicated for cryotherapy are treated onsite while those that are not suitable for cryotherapy are referred for follow up using pap test or colposcopy and biopsy.

Screening for cancer and prevention in developing countries and the Sub-Saharan region faces a multitude of challenges. These include deficiency of community cognizance, poor infrastructure, deficient screening and diagnostic modalities, modest medical records for planning and cultural aversion to discuss sexual functions [11]. Most challenges documented in Kenya include: "low perception of risk, fear of abnormal cervical cancer screening results, lack of finance for the services and lack of awareness", pg 2 [23]. Low screening uptake in Kenya has resulted into late presentation of cervical cancer cases [17]. Even though cervical cancer awareness has been explored in other parts of the country, not much has been done in Makueni county. In light of the aforementioned, we sought to determine the knowledge level on cervical cancer among immune compromised women seeking comprehensive care services at Makueni county hospital.

2.0. Methodology

This was a cross sectional study conducted in Makueni county referral hospital over a period of 5months; December 2015 to April 2016 to determine the knowledge level on cervical cancer among HIV/AIDS positive patients seeking care services at comprehensive care clinic (CCC).

The study population was aged 18 years and above with an inclusion criterion of them being women living with HIV and who consented to participate in this study. Fisher's formula was used to determine the sample size and a proportion of 26.7% was used resulting in a sample population of 100. A semi structured questionnaire administered by a trained nurse was used to obtain data on the social and demographic features of the participants,

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information on risk factors, causes of cancer, who is at risk of cancer of the cervix and whether this cancer would be prevented or not. Ethical clearance was sought from Kenyatta National Hospital/University of Nairobi, Ethics and Research Committee, P145/02/2016. Permission to conduct research in Makueni referral hospital was sought from the health management team. The participants were recruited into the study with informed consent. Collected data was entered in excel and analyzed using SPSS version 20.

2.0 Results

2.1. Social and demographic features of the study subjects

An aggregate of 100 women living with HIV who met selection criteria were recruited into the study. The response rate was 99%. Age was normally distributed among the participants with age range of 22-65 years, mean age of 45.

Majority (38%) of the respondents were between 36-45 years, 21% between 26-35 years, 8% between 56-65% and 1% was aged 0-25 years. Most (52%) of the participants had attained primary education, 39% secondary education, 7% had attained university/college level while 2% had not attended school. 50% of the respondents were farmers with fluctuating income, with 72% earning less than 200 per day (Table 1).

Table 1.	Distribution	of social	and	demographic	features
	of t	he study	sub	jects	

Variable	Sample size	Percentage	
	(n)	(%)	
Age category (n=100)			
0-25	1	1	
26-35	21	21	
36-45	38	38	
46-55	32	32	
56-65	8	8	
Marital status			
Married	29	29	
Divorced	7	7	
Single	29	29	
Widow	23	23	
Married by a woman	1	1	
Education level			
College/university	7	7	
Secondary	39	39	
Primary	52	51	
Did not attend any school	2	2	
Gross income per day			
Below 200	72	72	
200-300	8	8	
Above 300	20	20	

2.2. Knowledge and awareness on cervical cancer

Study subjects/respondents were to indicate if they had ever heard about cancer of the cervix by giving yes or no answer. If yes, they were to name the risk factors for cervical cancer. Among 100 participants, 98% had overheard about cancer of the cervix yet barely 7% had been screened by papanicolaou smear test (cervical cytology).

2.2.1. Ways to prevent cervical cancer

To prevent cancer of the cervix; early screening, treatment, HPV vaccination, being faithful to one partner and protected sex were considered correct knowledge. Any other answer given was considered incorrect knowledge. Among the study participants, 83% said cervical cancer was preventable, 8% said no and another 8% didn't know whether it was preventable. However, 18% didn't know any ways of preventing cancer of the cervix and 4% thought there were no ways to prevent it. Majority (58%) of the women knew that cancer of cervix can be prevented by screening, although, they had not been previously screened.

2.2.2. Risk factors for cancer of the cervix

On who is probable of getting cancer of the cervix, women of reproductive age and 18-69 years were considered correct. 11% said women of reproductive age were at risk giving correct answer on who was at risk. 46% of the respondents said all women were at risk of cervical cancer, 18 % said anybody was at risk of cervical cancer. 1 % thought being barren was a risk factor, 2 % said those having sex and 5% didn't know.

Risk factors such as sex with multiple partners, engaging sexual activities at an early age, and smoking, prolonged use of oral contraceptive, family history, cervical cancer and sexually transmitted infections were considered as correct. Participants were allowed to give multiple responses. Other answer given by respondents was considered incorrect. 38% gave correct answer of one or more risk factors. None identified smoking, weakened immune system, and early onset of sexual activity as risk factors. None of them identified more than one risk factor correctly. Multiple sexual partners, sexually transmitted disease and prolonged use of oral contraceptive were the known risk factors from participants. However other myths such as unhygienic, home delivery, ARV drug use, weak uterus were reported as illustrated in table 2.

Table 2. Respondents perceived risk factor.				
Risk factors ¹	Percentage			
Poor hygiene	9 %			
Family planning	10 %			
Weak uterus	2 %			
Unprotected sex	12 %			
Having sex with infected persons	4 %			
ARV drugs	2 %			
Food option	7 %			
Home delivery	1 %			
Don't know	34 %			
Condom use	4%			
Multiparity	2%			
Multiple sex partner	6%			

Table 2. Respondents perceived risk factor

2.3 Association between Knowledge level and sociodemographic characteristics

Knowledge level was computed from the four variables; what is the risk factor of cancer, what causes cancer, who is at risk of cancer of the cervix and can it be prevented. Scores of "0" for none variable mentioned right, "1" for one factor variable, "2" for 2 variables, "3" for 3 variables and "4" for 4 variables mentioned right were used to grade the knowledge level. 48% answered only one variable correct, 17 % two variables and only one got three variables with none knowing all variables.

Unlike similar studies using bivariate analysis (Pearson correlation coefficient) no correlation was established between Knowledge level and the sociodemographic characteristics (Age, education level and marital status).

4.0 Discussion

Among our study participants, 98 % had heard about cervical cancer. These results are consistent with that reported in a study in Kisumu (99%). Comparable results have also been reported in Kasarani among primary teachers where 82.2% had heard of cancer of the cervix [13] and in Njiru (85%) [18]. Our study findings contrasts that done in Ethiopia reporting 30.3% (95%CI: 27.7, 32.9) in one study and two others 34.2%, and 58.7% of the women having heard of cancer of the cervix [20, 21, 22]. This could be due to the scale up of health education in the county and the nation (Kenya) at large.

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Concerning risk factors, findings from this study reveals that there is little information on risk factors for cancer of the cervix among the study participants. Respondents were ignorant about HPV as a causative agent for cancer of the cervix, comparable results to a study done in the urban area of Songea [8] and one done in Malawi [6]. Only 38% correctly identified risk factors with none mentioning Human Papillomavirus (HPV). This contradicts reports from a study done in Embu, Kenya where 23.3% identified HPV as a risk factor [12]. A study done in voluntary counselling and testing centers (VCT) in Nairobi revealed that only 18% of the study population had heard about HPV. This was similar to results obtained in Tharaka Nithi and Isiolo counties giving a sharp contrast to that of ours. In one study done at Kasarani.39% of the participants named HPV as a risk factor. This report is very different from ours as none linked this virus to risk of developing cancer. This could be associated to the education level of the participants as majority in our study had primary education. Kasarani is an urban town with most occupants assumed of having attained tertiary education and above. This could also be attributed to the variation of number of participants in the study. Our study recruited few study subjects as compared to other studies.

In one study involving all women at Kisii town, 15% of respondents (HIV status not considered) knew about risk factors; having multiple sexual partners being one of them. On the other hand, 11.3% knew the association of HPV virus to cervical cancer [16]. The difference could be due to variations in creation of awareness.

In Kenya, virtually almost all comprehensive care clinics offer screening services using visual inspection of the cervix using acetic acid or visual inspection using Lugol's iodine (VIA/VILI). Thereafter, women with positive results are referred for pap smear screening. From the findings of this study, 7% had undergone screening by cervical cytology. This was comparable to the report from a study in Kisumu (6%). However, these findings differ from those reported in Western Kenya (84%) [15], Isiolo and Tharaka Nithi (25.6%; 96/360). Our study findings also contrast that reported in Ethiopia (10.8%) [20]. This could be due to variations in knowledge gap between the study populations. Low rates of screening among Kenyan women has been attributed to lack of knowledge and fear of the outcome.

5.0 Conclusion

The findings from this research shows limited knowledge about cancer of the cervix. Despite many having heard of cervical cancer, this has not translated into increased knowledge and practice regarding screening for the same. More investigations need to be conducted to understand barriers to information and practice of cancer cervix prevention especially in HIV patients; a high risk population with higher access to health facilities.

Limitations of this Study

Since this study was hospital based, findings cannot be generalized to the entire population of Makueni county and it cannot also be generalized to the whole nation as it involved only one community in Kenya.

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