

An update on premalignant cervical lesions and cervical cancer screening services among HIV positive women.

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Abstract

Cervical cancer screening is the major public health strategy for secondary prevention of cervical cancer especially in the HIV infected women. There a very low utilization of cervical cancer screening services in the developing countries. This is despite the high prevalence of premalignant cervical lesions. New strategies facilitate screening in resource-limited settings. An organized effective prevention and control program requires adequate resources and finances. It needs manpower and infrastructure. It is necessary to have surveillance mechanisms of the targeted women with education and sensitization with monitoring and evaluation mechanisms for effectiveness.

Keywords: Uptake, Cervical cancer, Screening, HIV, Women.

Introduction

Cervical cancer screening is the major public health strategy for secondary prevention of cervical cancer especially in the HIV infected women [1-2]. Screening services have been expanding since the WHO (2013) guideline advocating for a Visual Inspection under Acetic acid (VIA) or Human Papilloma Virus (HPV-based) “screen and treat” approach, with mobile units reaching more rural areas and cervical cancer prevention integrating HIV and family planning services [3]. Born on 13th May, 1883 in Greece, George Papanicolaou is considered the father of cervical cancer screening. He was the pioneer in studying the cytologic characteristics of the reproductive tract. He invented the Papanicolaou test which is now commonly known as the Pap smear [4].

With the discovery of Human Immunodeficiency Virus (HIV) infection in the early 1980s, cervical cancer was observed to be commonest in the infected women [5]. Most high income countries (HIC) like the United States were able to control cervical cancer in the HIV population by doing annual screening by a Papanicolaou smear. They were able to detect over 94% of the cervical cancer cases at the *in situ* stage and this eased management [5]. Later in 2013, the World Health Organization recommended that all women with HIV should have annual screening and these guidelines have been adopted by most other countries [6].

Uptake rate of cervical cancer screening services amongst women living with HIV

In a qualitative study, Cross, Suharwardy, Bodavula, Schechtman, Overton, [7] analyzed a quality improvement

intervention to increase cervical cancer screening rates in an urban academic HIV clinic and to identify factors associated with inadequate screening in Washington University in St. Louis Infectious Diseases clinic. They reported a multidisciplinary quality improvement intervention to improve cervical cancer screening coverage. The barriers to screening were identified by a multidisciplinary quality improvement committee and then strategies to address the barriers were developed. When these interventions were implemented, the coverage shot from 53% to 75.3% in the following year. It is therefore important to assess the uptake rate and then the factors that influence uptake for proper planning.

A study [8] done on a population based survey to understand the preventable fractions of cervical cancer *via* effective screening in six Baltic, Central, and Eastern European countries for the next 25 years (2017–40). They found that screening for premalignant lesions of the cervix is still ineffective in some regions. In Europe, some countries also still lacked effective cervical cancer screening. They reported that there would be a projected continued increase in incidence rates compared to a 50-60% reduction by 2040 in the same countries if screening was introduced.

Most studies, however, have reported high acceptance and uptake rates of cervical cancer screening service by the HIV infected women. For example, [9] carried out a study to review screening and treatment outcomes over nearly four years of project implementation and to identify lessons learned to improve cervical cancer prevention programs in Ethiopia and other resource-constrained settings. They reported up to 99% uptake rate amongst 16,632 women with HIV who

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were counseled for screening. They analyzed aggregate client data for about four years of project implementation and visual inspection under acetic acid (VIA) was the model of screening used during the study. However, since patients were being offered treatment if found positive on screening, this could have encouraged uptake of the screening services in one way or another.

A study [10] also reported their findings from a project implementation activity on Opt-out cervical cancer screening in HIV clinical care settings concerning their experiences on coverage. They shared experience from mild may Uganda clinic and this was a success story. They offered HIV/AIDS clinical care and decided to start screening of cervical cancer in 2008 using the opt-out approach. They also did an on-site “see and treat” model for those that qualified. The reported an overall refusal rate of less than five percent with an increased coverage in cervical cancer screening.

A systematic review [11] of cervical cancer prevention modalities available for women living with HIV in developing countries. They reported a very low utilization of cervical cancer screening services in the developing countries. For example [12] studied the factors associated with intention to screen for cervical cancer among women of reproductive age in Masaka Uganda using the attitude, social influence and self-efficacy (ASE) model. It was a community-based survey and they reported that only Seven percent of the participants had ever had at least one episode of cervical cancer screening though majority (63%) showed intention to screen.

Prevalence of Premalignant cervical lesions amongst HIV positive women

Human Papilloma Virus (HPV) that causes cervical cancer; just like Human Immunodeficiency Virus (HIV); is spread by sexual intercourse with infected persons. About 12% of females and 14% of the males in Uganda report to have had sexual intercourse by the age of 15 years [13]. This shows early exposure to HPV and high risk for HIV.

In a systematic review of 380 research papers by [14], on cervical cancer prevention and treatment research in Africa. It was found that several countries in Africa had little or no cervical cancer research ever conducted. It should also be acknowledged that research on HIV and cervical cancer is still taking shape and up to the year 2016, only about 11.3% of research on cervical cancer was amongst HIV infected women [14].

Factors influencing uptake of cervical cancer screening among HIV positive women

Socio-demographic factors influencing uptake of cervical cancer screening among HIV positive women: There’s need to target the women of low socio-economic status as they are apparently at higher risk of developing cervical cancer [6]. This is more complicated when it comes to the women living with HIV/AIDS. A systematic review [15] on integrating cervical cancer with HIV healthcare services in Africa. They enumerated several other factors that influence the uptake of cervical cancer screening like availability of treatment and transport costs. This is due to low income level. All in all,

limited research concerning the socioeconomic factors that affect the uptake of cervical cancer screening services exists. The demographics of HIV infected women may also vary from the entire population characteristics. There is therefore, need to enumerate how these factors directly influence the uptake of screening. A study [16] on cervical cancer amongst HIV positive women in USA. This was a retrospective cohort study from a tertiary care HIV clinic in Ottawa. Most of the young ones were the ones likely to test for cervical cancer compared to the elderly. In fact, most (over 73%) of the women under 30 years of age had at least had one episode of cervical cancer screening in the last 3 years compared to less than 50% of those above 30 years of age. This could be attributed to poor health seeking behavior amongst the elderly women. However, this was a retrospective chart review at a tertiary HIV clinic.

A study [12] carried out a community based survey to understand the low level of cervical cancer screening on women in Masaka in Central Uganda. Their findings were not very different. They also found out that decision by women also affects practice of cervical cancer screening. Many women (about one third) would have to consult someone before deciding to go for cervical cancer screening. Majority of those who discuss with their husband (>80%) are more likely to go for cervical cancer screening compared to those who do not. This therefore shows that social influence from important house-hold members such as the spouse plays a significant positive role in intention to screen for cervical cancer. There is therefore need to emphasize the need to increase male involvement in cervical cancer screening services because the lack of male involvement is reportedly prohibitive for successful health programs. This survey however did not assess for those who had HIV and did not study the prevalence of premalignant cervical lesions in the population.

A study at Kampala International University Teaching Hospital on women attending the gynaecology clinic, majority of the low socio-economic status women were less likely to have been screened for cervical cancer before. They were also less likely to test positive for premalignant cervical lesion. This shows how the socioeconomic status influences uptake of screening. In the same study, they found that age influences the likelihood of being screened for cervical cancer. They observed that the young population was more likely to test than the elderly. Though this could be associated to the income level, it cannot entirely explain this disparity in the two age groups. This, was, however in the general population and not in the HIV infected women only.

Health system related factors influencing uptake of cervical cancer screening among HIV positive women: According to [17], evidence exists that screening for premalignant cervical lesions reduces the burden, morbidity and mortality of cervical cancer. For example, over the last 30 years, the incidence has reduced by over 50% in the United States and this is attributed to screening alone [18]. And for this reason, current guidelines recommend that HIV positive women receive screening tests at their baseline evaluations, then again at six months, and annually thereafter, if they have normal test results.

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A study [19] carried out a survey on the coverage of cervical cancer screening in 57 countries. They highlighted a low level average and large inequalities between the different countries' health systems. They also reported that coverage of cervical cancer screening in developing countries was on average 19%, compared to 63% in developed countries, and ranged from 1% in Bangladesh to 73% in Brazil. A study [16] also carried out a systematic review on integrating cervical cancer with HIV health care services in Africa. They documented a number of factors affecting the integration of these two services. Hospital related barriers like long time to wait for treatment, long distances and lack of time discourage practice of cervical cancer screening influence screening for cervical cancer. Other challenges included lack of adequate staff and skilled staff, lack of pathologists, staff fatigue, high staff turnover and lack of motivation and financial incentives to providers. High loss to follow up to further care also limited other chain management and logistical support. Other facilitator factors included single-visit approach (see-and-treat), low cost of screening and transport, integration with in pre-existing infrastructure and stake holder involvement and community participation and health promotion targeting patients and workers. Poor access to cervical cancer screening services also resulted in the low cytological screening coverage rates in Africa.

Conclusion

There is a very low utilization of cervical cancer screening services in the developing countries. This is despite the high prevalence of premalignant cervical lesions. New strategies facilitate screening in resource-limited settings. An organized effective prevention and control program requires adequate resources and finances. It needs manpower and infrastructure. It is necessary to have surveillance mechanisms of the targeted women with education and sensitization with monitoring and evaluation mechanisms for effectiveness.

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