



Review Article

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# Cervical Cancer: Ethiopia's Outlook



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## Abstract

Globally, cervical cancer accounted for an estimated 528,000 new cancer cases worldwide and for 266,000 deaths in 2012. In Ethiopia, 35.9 new cases of cervical cancer are diagnosed and 22.6 die from it, per 100,000 women annually.

There are many factors associated with cervical cancer in Ethiopia such as Human Papilloma Virus (HPV), cultural factors, Poverty, Co-infection and lack of awareness. Ethiopia has no standard policy or protocol for cervical cancer screening rather it is patchy or inconsistent. Ethiopian women typically present for cancer care at a late stage in the disease, where treatment is likely ineffective. To produce significant decrease in incidence and mortality, barriers should be addressed as well research studies should be strengthened in the areas of cervical cancer.

**Keywords:** Cervical cancer; Screening; Outlook; Ethiopia

## Introduction

Cancer begins from a single cell though its transformation into tumour cell is progressive [1]. Cervical cancer is a malignant neoplasm from cells originating in the cervix uteri [2]. A sexually transmitted virus called HPV is responsible for more than 99% of cervical cancer cases and its precursors [3]. Any woman who is sexually active is at risk of getting HPV. Globally, cervical cancer accounted for an estimated 528,000 new cancer cases worldwide and for 266,000 deaths in 2012. Although it occurs worldwide, but the highest incidence and mortality rates are found in low income countries, despite the fact that it is preventable [4]. In some developing countries cervical cancer kills more women than maternal mortality, for example in Chile, South Africa and Argentina [3].

Ethiopia is among the least urbanised countries in the world (84% of the population reside in rural area) [5]. It is the second most populous nation in Africa with about 44 million females [6]. There are nearly 26 million Ethiopian women who are over the age of 15 and believed to be at risk of getting HPV, the causative agent [7]. In Ethiopia, 35.9 new cases of cervical cancer are diagnosed and 22.6 die from it, per 100,000 women annually [8]. The objective of this review is to demonstrate Ethiopia's stand on incidence, mortality, factors associated, screening service and treatment of cervical cancer.

## Methods

### Search strategies and inclusion criteria

The electronic databases Medline, PubMed, Ethiopia's medical and Reproductive health journals, and Bio MED central were searched for relevant articles. Inclusion criteria of the articles were:

- Published during 2000-2015;
- Quantitative or qualitative study;
- Reported in English;
- Related to Ethiopia, sub-Saharan Africa and published in peer-reviewed journals. The full texts of the potentially relevant articles were retrieved and data extraction were then undertaken.

### Incidence and mortality

In sub-Saharan Africa, 34.8 new cases of cervical cancer are diagnosed per 100 000 women annually, and 22.5 per 100 000 women die from the disease [9]. Sub-Saharan Africa has 22% of all global cervical cancer cases [10]. In Ethiopia, it has been estimated that about 7,000 of new cervical cancer cases occur every year and about 5,000 die from it [11]. This figure could be low given that the nation has no cancer register centre as well

cervical cancer screening and treatment service is either not available or inconsistent.

### Factors associated with cervical cancer in Ethiopia

**Human papilloma virus (HPV):** It has been established that cervical malignancy is associated with HPV infection. The worldwide prevalence of infection with human papillomavirus (HPV) in women without cervical abnormalities is 11-12% with higher rates in sub-Saharan Africa (24%) [12]. In Ethiopia no data is available on burden of HPV infection, nevertheless about 35.8% of women in the general population are estimated to harbour cervical HPV infection at a given time in the Eastern Africa, the region Ethiopia belongs to [13].

**Cultural factors:** There are many cultural factors that contribute to the acquisition of HPV and its progression to cancer. This includes High parity, early marriage, multiple sexual partners, and diseases that reduce immunity status. High parity has long been suspected of being associated with an increased risk of cervical cancer. A study has found a direct association between the number of full-term pregnancies and squamous-cell cancer risk: the odds ratio for seven full-term pregnancies or more was 3.8 compared with nulliparous women and 2.3 compared with women who had one or two full-term pregnancies. They concluded that High parity increases the risk of squamous-cell carcinoma of the cervix among HPV-positive women [14]. An Ethiopian woman has 4.8 average numbers of children [15].

Early marriage is norm and commonly practiced in the northern part of the nation, has a link with development of cervical cancer. A study has found out that cervical cancer risk is closely linked to age at first birth; the odds ratio was highest among women who gave birth at age 16 or younger (4.4), and then ranged from 2.5 among those who initially delivered at ages 17-19 to about 2.2 among those who did so at age 20 or older [16]. According to EDHS 2011 and the median age at first marriage is 16.5 [15]. Polygamy is acceptable in some cultures in the country which increase the likelihood of getting HPV infection for the women.

The other factor is having multiple sexual partners which puts at risk of getting HPV as well sexually transmitted diseases. A hospital based cross-sectional study conducted in southern Ethiopia showed that life time number of sexual partners and history of sexually transmitted disease were found to be associated (on multivariate analysis at p-value less than 0.05) with precancerous cervical cancer lesion [17].

**Co-infection:** Cervical cancer was made an acquired immunodeficiency syndrome (AIDS-) defining illness in 1993. Pathfinder International Ethiopia estimated that about 534,000 HIV positive women are among the most vulnerable to develop cervical cancer [18]. A comparative cross-sectional study was conducted in northern Ethiopia which showed that 63.6% of HIV positive women were found to have cervical epithelialcell

abnormality than their counterpart (HIV negative women). In the same study they concluded that those with HIV positive status were at greater risk of getting cervical cancer as compared to those with negative status [19].

**Poverty:** Poverty is endemic in the sub-Saharan Africa, the nation belongs to. A study that has found out a strong association between cervical cancer and the level of development, rates being at least four-fold higher in countries defined within the low ranking of the Human Development Index (HDI) compared with those in the very high category [12]. Cervical cancer is believed as the disease of the low socio-economic class.

**Lack of awareness:** Cervical cancer is nearly 100% preventable if it is detected early; however service accessibility and women's awareness matters a lot. A recent qualitative study done in Ethiopia has shown that people believe that breaching taboo or undertaking unacceptable behaviour as aetiology of cervical cancer. The study concluded saying that there is very low level of awareness about cervical cancer. In the same qualitative study, participants from rural areas of Ethiopia neither know nor heard of cervical cancer. The sad news is that when women were briefed about signs and symptoms of cervical cancer many mentioned number of women who suffered from such symptoms and passed away without knowing what it was [20]. Moreover, a cross sectional study done among HIV positive women in the capital city of Ethiopia showed that only 1/3rd of participants knew about cervical cancer and most of their source were health professionals [21]. In most populous nation of Africa, personal barriers to screening include the lack of awareness, and belief that cervical cancer is not preventable [22].

### Prevention and screening of cervical cancer

Detection of cancer at an early stage may be considered as a marker for access to health care and preventive health services, including cervical cancer screening. Both incidence and mortality can be reduced by detecting precancerous lesions then prompt treatment which can prevent its progression, thereby increasing patient survival.

Nevertheless, there are many barriers to establishing cervical cancer screening programs in Ethiopia. These include lack of trained professionals, the demands of conflicting health needs such as preventable communicable diseases, poorly developed health care services that tend to focus more on curative than preventive health care, and the fact that women are often uninformed as to their needs for preventive health care. Hence, cervical cancer is eclipsed by other health priorities.

It is worth mentioning that the success of screening programmes is determined by various factors such as good attendance rates by women at high risk, careful planning and execution of the program. Ethiopia has no standard policy or protocol for cervical cancer screening rather it is patchy or inconsistent [14].

## Treatment of cervical cancer

Basically, non-physicians can perform the simple and affordable screening and treatment procedures such as Visual inspection with acetic acid to screen and cryotherapy to treat, provided that they receive adequate and on-going training. Sadly, Ethiopian women typically present for cancer care at a late stage in the disease, where treatment is most ineffective [23]. In addition, public oncologic treatment is located only in the capital city, Addis Ababa, at Black Lion Hospital; the centre is believed to be the most crowded as it serve the whole nation and deals with all types of cancer treatment. Brachy therapy treatment is not available in Ethiopia [24].

## Conclusion

In Ethiopia multiple factors contribute to the development of cervical cancer such as competing health interests, lack of awareness, unavailability of cervical cancer screening, treatment services and among others. Ethiopian mother are losing their lives from preventable disease. To produce significant decrease in incidence and mortality, barriers should be addressed, awareness should be created and there must be an effective screening and prevention services that facilitate early detection and treatment. Research studies should be conducted in the areas of cervical cancer to fill gaps in availability of information/data.

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## Competing Interests

I declare that I have no competing of interests.

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