Review of: "Histopathological Patterns of Cervical Cancer Among Females Presenting to Makerere University Pathology Core Reference Laboratory. A 5-Year Review"

Sveinung Wergeland Sørbye

Potential competing interests: No potential competing interests to declare.

Abstract, Background and Aim, “The global burden of cervical cancer is heavy in low- and middle-income countries, having highest rates in sub-Saharan Africa” => “Cervical cancer is the fourth most common cancer among women globally, with an estimated 604 000 new cases and 342 000 deaths in 2020, about 90% of these occur in low- and middle-income countries, having highest rates in sub-Saharan Africa”

Abstract, Conclusions, “Routine screening of all HIV positive women and women aged 35 and above is recommended” => “Routine screening of all HIV positive women and women aged 30 and above is recommended”

Cervical cancer can be prevented through HPV vaccination and screening with HPV testing, cell samples, or VIA. The purpose of screening is not to detect cervical cancer, but to detect precursors (CIN2/3) that can be treated before the development of cervical cancer. If you want to prevent cervical cancer development in 35 years old women, the screening has to start at 30 years of age to detect the precursors.

List of Operation Definitions, “Cervical cancer; Cervical cancer is a type of cancer that occurs in the cells of the cervix — the lower part of the uterus that connects to the vagina” => “Cervical cancer; Cervical cancer is a type of cancer that occurs in the cervix, which is the lower part of the uterus that connects to the vagina”

Introduction, “Cervical cancer is a type of cancer that begins on the mouth of the uterus (cervix). Cells on the cervix begin to grow slowly and abnormally over several years. These early (pre-cancerous) changes can disappear on their own without causing problems, however in some women, they grow into cancer if they are not identified and treated early” => “Cervical carcinoma is a malignant neoplasm that originates from the cervical epithelium, specifically the transformation zone of the cervix. The disease is characterized by a prolonged pre-invasive phase, during which the cervical epithelial cells undergo abnormal proliferation, known as cervical intraepithelial neoplasia (CIN). These premalignant changes may either regress spontaneously or progress to invasive carcinoma if left untreated”

Introduction, “The common cause of cervical cancer is Human Papilloma Virus (HPV)” => “Persistent infection with Human papillomavirus (HPV) infection is the primary etiological factor for cervical carcinoma”

Introduction, “Over 100 types of HPV are currently known, most are not associated with cervical cancer or genital warts” => “Over 200 types of HPV are currently known, most are not associated with cervical cancer or genital warts”

Per August 2022 there is 229 different HPV-types identified

https://ki.se/en/labmed/international-hpv-reference-center

Introduction, “Histological screening and diagnosis of cervical cancer is very crucial in prevention, early detection and treatment of cervical cancer and is recommended in all women of reproductive age” => “Regular cervical cancer screening, including HPV-testing, VIA, cytological and/or histological examination of cervical specimens, is recommended for women 30-60 years of age in order to identify precancerous lesions and cervical carcinomas in their earliest, most treatable stages. The histological evaluation of cervical tissue samples is a crucial aspect in the early detection and management of cervical carcinoma”

Literature review, Background, “Patient who screen positive should have a histological diagnosis before they are confirmed of cervical cancer” => “Patients who screen positive should undergo histological confirmation for diagnosis of cervical intraepithelial neoplasia (CIN) or cervical carcinoma”

(The main purpose of screening is not to detect cervical cancer, but to detect precursors (CIN2/3) that can be treated before the development of cervical cancer).

Literature review, Background, “The classification is based on the thickness of the abnormal epithelium: the deeper the abnormal cells reach from the basement membrane toward the upper layer of cells, the higher the degree” => “The World Health Organization (WHO) categorizes cervical intraepithelial neoplasia (CIN) according to the depth of the abnormal epithelial proliferation relative to the basement membrane. The proportion of cervical epithelium exhibiting dysplastic cells determines the grade of the dysplasia. Specifically, CIN is classified as low-grade (CIN1), if the abnormal epithelial proliferation extends less than one-third of the thickness of the epithelium; as high-grade (CIN2), if the abnormal epithelial proliferation extends for more than one-third but less than two-thirds of the thickness of the epithelium; and CIN3, if the abnormal epithelial proliferation extends for more than two-thirds of the thickness of the epithelium. Dysplasia becomes cancer when it invades the basement membrane”

Discussion of findings, “The prevalence of cervical cancer increases with age due to long-lasting infection with certain types of human papillomavirus (HPV) among women, which later causes cervical cancer due to diminished immune functioning associated with increase in age”

In most developed countries with a national cervical cancer screening program, the incidence of cervical cancer declines after 40 years of age because precancerous lesions (CIN2/3) are detected and treated in women 25-39 years of age before cervical cancer development.

Peto J, Gilham C, Fletcher O, Matthews FE. The cervical cancer epidemic that screening has prevented in the UK. Lancet. 2004 Jul 17-23;364(9430):249-56. doi: 10.1016/S0140-6736(04)16674-9. PMID: 15262102.

https://pubmed.ncbi.nlm.nih.gov/15262102/

Vaccarella S, Franceschi S, Engholm G, Lönnberg S, Khan S, Bray F. 50 years of screening in the Nordic countries: quantifying the effects on cervical cancer incidence. Br J Cancer. 2014 Aug 26;111(5):965-9. doi: 10.1038/bjc.2014.362. Epub 2014 Jul 3. PMID: 24992581; PMCID: PMC4150271.

https://pubmed.ncbi.nlm.nih.gov/24992581/

Pedersen K, Fogelberg S, Thamsborg LH, Clements M, Nygård M, Kristiansen IS, Lynge E, Sparén P, Kim JJ, Burger EA. An overview of cervical cancer epidemiology and prevention in Scandinavia. Acta Obstet Gynecol Scand. 2018 Jul;97(7):795-807. doi: 10.1111/aogs.13313. Epub 2018 Feb 23. PMID: 29388202.

https://pubmed.ncbi.nlm.nih.gov/29388202/

Discussion of findings, “In fact, HIV is responsible for around 5% of all cervical cancer cases worldwide and is the leading cause of death among women living with HIV” => “Women with HIV are at an increased risk of developing cervical cancer compared to those who are HIV-negative. This is because the HIV virus weakens the immune system, making it harder for the body to fight off the human papillomavirus (HPV), which is a known cause of cervical cancer. Globally, 5.8% of new cervical cancer cases in 2018 were diagnosed in women living with HIV, and cervical cancer is the leading cause of death among women living with HIV”

HIV is not causing cervical cancer per se, but women with HIV have reduced immune system, and immunosuppressed women have problems to clear the HPV infection.

Conclusions, Recommendations, “Routine screening of all HIV positive women and women aged 35 years and above is recommended” => “Routine screening of all HIV positive women and women aged 30-60 years of age is recommended”

Conclusions, Recommendations, “Identified patients of cervical cancer should be treated immediately as they are likely to have cervical cancer pattern with a high prognostic value” => “Patients who have been diagnosed with cervical cancer should receive prompt treatment, as early intervention is associated with improved prognostic outcomes.”

It's worth noting that cervical cancer can have different patterns and stages, a patient's treatment plan will be tailored based on their individual diagnosis, which may include the size and location of the tumour, as well as the presence or absence of lymph node or distant metastasis. The patient's overall health and preferences will also be considered when determining the best course of treatment.