HOW CAN CERVICAL CANCER BE PREVENTED? DOES SCREENING HELP OR VACCINES? EARLY DETECTION OF CERVICAL CANCER.

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Annotation: *Nowadays, cervical cancer* is the 8th most common cancer worldwide *and the 4th most common cancer among women. It hurts women reproductive system and cause of cervical cancer is human papillomaviruses. HPV is extremely common viruses transmitted through sexual content.*

Аннотация: *В настоящее время рак шейки матки является 8-м по распространенности раком в мире и 4-м по распространенности раком среди женщин. Он поражает репродуктивную систему женщин, а причиной*

рака шейки матки являются вирусы папилломы человека. ВПЧ является чрезвычайно распространенным вирусом, передающимся половым путем.

***Annotatsiya**: Hozirgi vaqtda bachadon bo'yni saratoni dunyo bo'ylab 8-o'rinda va ayollar orasida 4-o'rinda turadi. Bu ayollarning reproduktiv tizimiga zarar etkazadi va bachadon bo'yni saratonining sababi inson papillomaviruslaridir. HPV jinsiy aloqa orqali yuqadigan juda keng tarqalgan virusdir.*

***Key words:** cervical cancer, human papillomaviruses, vaccines, precancerous lesion*

***Ключевые слова:** рак шейки матки, вирусы папилломы человека, вакцины, предраковые поражения*

***Kalit so'zlar:** bachadon bo'yni saratoni, inson papillomaviruslari, vaksinalar, saraton oldi simptomlari*

***Abstract:** Almost all cervical cancer cases are linked to infection with high-risk human papillomaviruses (HPV), an extremely common virus transmitted through sexual contact. Cervical cancer is commonly diagnosed in women aged 35 to 45 years. A thorough history reveals the presence of essential risk factors that are associated with cervical cancer, such as an immunocompromised state, high-risk sexual behavior, multiple sexual partners, a history of sexually transmitted diseases, and tobacco smoking. Many women are asymptomatic.*

Cervical cancer is one of the most successfully treatable forms of cancer, as long as it is detected early and managed effectively. There are 2 main types of cervical cancer: squamous cell carcinoma and adenocarcinoma.

Introduction:

The 2022 WHO position paper presents the current policy recommendations for HPV vaccines in prevention of HPV-related disease in children aged 9 years or older, with the priority purpose of preventing cervical cancer. HPV vaccination is recommended in both males and females. As men cannot develop cervical cancer, the HPV vaccine may prevent or reduce the risk of genital diseases such as genital warts, penile cancer, anal cancer, and the spread of HPV to sexual partners. It is not recommended in pregnant patients due to inadequate evidence of safety. All HPV vaccines are produced by using recombinant DNA and cell-culture technology. They do not contain live biological products or viral DNA and are therefore non-infectious.

Squamous cells are the flat, skin-like cells covering the cervix's outer surface (the ectocervix). Between 80 and 90 out of every 100 cervical cancers (80 to 90%) are squamous cell cancers.

Adenocarcinoma is a cancer that starts in the gland cells that produce mucus. The cervix has glandular cells scattered along the inside of the passage that runs from the cervix to the womb (endocervix). Adenocarcinoma is less common than squamous cell cancer, but has become more common in recent years. Between 10 and 20 out of every 100 cervical cancers (10 to 20%) are adenocarcinomas. Adenocarcinoma is treated in the same way as squamous cell cancer of the cervix.

Sign and symptoms of cervical cancer are bleeding of the vagina (not during menstruation cycle), pain during sexual life and after bleeding, bad smell from the vagina, pain in the lower abdomen.

Methods and materials:

All adult women should undergo periodic cervical cancer screening. Screening aims to detect precancerous lesions, that is, abnormalities in the cells of

the cervix, which, if left untreated, can develop into cervical cancer. When found, precancerous lesions must be treated. Screening and treatment of precancerous lesions, also referred to as “secondary prevention” is the second pillar of the recommended WHO’s comprehensive approach to cervical cancer. There are a number of recommended screening and treatment options. The Global strategy to accelerate the elimination of cervical cancer as a public health problem recommends that 70% of women are screened with high-performance tests by ages 35 and 45 years. Screening might also result in cervical cancer diagnosis. Detection of cancer and treatment must be done together (tertiary prevention), as cervical cancer can be treated effectively, particularly if detected early. Women need cervical cancer screening every year if they have nor any signs or symptoms. It is important to recognise upfront that in selected countries, reductions of up to 70% in cervical cancer incidence and mortality have been achieved by repeated conventional cytology screening tests. The successful screening programmes are usually centralised and coordinated by the public health systems and require consistent compliance of the population. In developed countries with opportunistic generalised screening and mixed activities in the public and private sectors, some subpopulations are largely over screened and eventually over treated. In many instances, the system is expensive and inefficient.

HPV vaccines:

a vision of a world where cervical cancer is eliminated as a public health problem;

a threshold of 4 per 100 000 women-years for elimination as a public health problem;

the following 90–70–90 targets that must be met by 2030 for countries to be on the path towards cervical cancer elimination:

- 90% of girls fully vaccinated with HPV vaccine by age 15 years
- 70% of women are screened with a high-performance test by 35 years of age and again by 45 years of age
- 90% of women identified with cervical disease receive treatment (90% of women with precancer treated, and 90% of women with invasive cancer managed).
- a mathematical model that illustrates the following interim benefits of achieving the 90–70–90 targets by 2030 in low- and lower-middle-income countries;

The development of practical and effective programmatic models of HPV screen-triage-and-treat for women living with HIV will depend on the availability of affordable HPV and triage tests, appropriate linkages with reproductive and HIV services, and effective registry mechanisms for recalling women for follow-up or referring them for further management. In many settings, bridging strategies will be needed to transition to the infrastructure needed to achieve implementation of these recommendations. During this transition to primary HPV DNA screening, cytology or VIA screening tests should be continued. Successful implementation of the recommended strategies will be critical to both address the substantial burden of disease in women living with HIV, and to improve health outcomes across all women. HPV vaccines do not cause infertility

Conclusion:

The National Immunization Strategy (NIS) is designed for better integration of immunization with other health interventions, universal health coverage targets and national planning cycles and focuses on long-term goals with intermediate objectives and prioritized strategies. The most preventive way from cervical cancer is vaccines against HPV. While cytology remains as the primary screening option,

scientific evidence already available suggests that follow-up after HPV vaccination should drift over time towards a generalised adoption of the new generation screening protocols, largely based upon the detection (and typing) of HPV DNA. The interest of these new protocols, in which the advantages of an HPV test over cytology in terms of sensitivity and positive predictive value are fully recognised, is further enhanced by the understanding that after eliminating HPV 16 and 18 from the spectrum of HPV infections and related lesions in vaccinated adolescents, the performance of the cytology as screening test will be further reduced.

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