

## MODERN ASPECTS OF CERVICAL CANCER DURING PREGNANCY

<sup>1</sup>Tugizova Dildora Ismoilovna , <sup>2</sup>Omonova Sabina

<sup>1,2</sup>Samarkand State Medical University

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**Abstract.** *Cervical cancer is the most common malignant tumor among the female population. More than 400 thousand cases of cervical cancer are detected annually around the world, of which just under half die in the first year after diagnosis. Cervical cancer takes the 2nd place among all malignant neoplasms in women. Cervical cancer in 3% of cases is diagnosed during pregnancy. The cause of cervical cancer is HPV. In pregnant women, HPV is detected in the laboratory 10 times more often than in non-pregnant.*

**Keywords:** *cervical cancer, human papillomavirus, pregnancy, estrogen, progesterone, cytological atipia.*

Currently, cervical cancer (CC) in most countries of the world continues to be the most common malignant tumor among the female population. Every year, more than 400,000 sick women around the world are diagnosed for the first time, of which a little less than half die within the first year after diagnosis due to late diagnosis and a high proportion (more than 48%) of patients with poor prognosis - stage II - IV . According to a number of authors, cervical cancer in the aggregate is 15.8% and ranks second among all malignant neoplasms in women [1,2,3]. Some foreign authors believe that the five-year survival rate for stage I CC is 88.8%, and for stage IV - only 7.8% [4,18,17]. Despite visual localization, cervical cancer (CC) remains one of the most common malignant tumors in women. According to GLOBOCAN [3,4,7], in 2018 there were 569,847 new cases of cervical cancer in the world (the 4th most common cancer in women worldwide) and 61,072 new cases in Europe (the 8th most common cancer in women). in Europe). The mortality statistics are also depressing: in 2018, 31,365 deaths were registered worldwide (the 4th most common cause of death from cancer in women) and 25,829 in Europe (the 10th most common cause of death from cancer in women in Europe).

Epidemiological data on the incidence rates of invasive cervical cancer show significant differences across countries: from 4 per 100 000 in Switzerland and up to 21 per 100 000 in Lithuania. In Belarus and the CIS countries, the incidence rates are in the range of 12-15 per 100 000 of the female population, adjusted by age structure to the world standard - World [3,4,19]. In many European countries, these figures are two times lower.

There is evidence in the literature that the age of the reproductive period is the most vulnerable to the incidence of cervical cancer, when cervical cancer becomes the main leading localization among other malignant neoplasms and, on average, ranges from 25 to 44 years [4,7,22].

According to a number of foreign authors, cancer is the second cause of death among women of reproductive age and in 0.02–0.1% is combined with pregnancy [8,15,23]. The most common tumors associated with pregnancy are cervical cancer, breast cancer, lymphomas and melanomas. No situation in practical medicine is as complex and emotional as the detection of a malignant tumor in a pregnant woman. A cancer diagnosis presents a difficult choice for a woman,

her family and medical staff. The gulf between the joy of the birth of a new life and the horror of the diagnosis of a malignant tumor creates many psychological and ethical problems [7,8,32].

AT Europe, 30% of patients with cervical cancer are women of reproductive age, in 3% of cases are diagnosed during time of pregnancy. The frequency of cervical cancer in time of pregnancy, according to individual national cancer registries, is 1.8 - 4.0 on one hundred 000 pregnancies [4,5,14].

Gestational age, maternal illness, treatment toxicity, timing of intervention - factors influencing early postnatal and long term results children born to women, at which in during pregnancy was diagnosed with cervical cancer. Difficulties arising in planning and treatment of patients with this pathology in during pregnancy, require the work of a multidisciplinary team in consisting of a neonatologist, oncogynecologist, obstetrician, teratologist, toxicologist and providing psychological support to throughout pregnancy and in postpartum period [5,6,33].

The prognosis for the initial forms of cervical cancer in non-pregnant women and during pregnancy is practically the same. It is difficult to predict the biological behavior of a cervical tumor during pregnancy [15,17,27]. The choice of treatment tactics depends not only on the stage of the disease and the duration of pregnancy, but also on the decision of the patient herself regarding pregnancy and the method of treatment, since the preservation of fertility during treatment with cervical cancer is at great risk [5,8,11]. Faced first with psychological difficulties, pregnant women do not in able to realize the upcoming difficulties, find a way out of the situation and make the right decision about conservation or termination of pregnancy, especially if this is the first desired pregnancy.

Thus, the problem of cervical cancer during pregnancy is a very relevant and controversial topic, since it gives rise not only to clinical issues that are difficult to resolve, but also to issues of ethics and deontology.

Epidemiological risk factors for developing cervical cancer during pregnancy are the same as among non-pregnant women. The trend towards an increase in the number of neoplastic processes in the mucous membrane of the cervix can be explained by the expansion of the prevalence of human papillomavirus (HPV), as well as the process of clinical activation of herpetic and cytomegalovirus infections during pregnancy. The 1996 WHO information bulletin officially confirmed that HPV is the cause of cervical cancer [12,15,22]. As you know, HPV infection increases the risk of developing dysplastic processes of the cervix 10 times. In pregnant women, HPV is detected in the laboratory 10 times more often than in non-pregnant women. Increased sensitivity of the cervical epithelium to HPV during pregnancy is associated with hormonal changes, the increasing influence of estrogens and progesterone, which increase the expression of HPV type 16 in the cervical epithelium [8,21].

It has been established that a necessary condition for the occurrence of precancerous changes in the cervix is the presence of certain HPVs, the subsequent integration of which can lead to the development of cancer. Approximately 9 to 13% of the world's population (about 630 million people) are carriers of HPV infection, and the assessment of the degree of infection varies depending on the country of residence [7,26,41].

The most significant factor is HPV - an infection with a relative risk of developing cervical cancer from 4 to 10. Recent studies have found a proportional increase in the frequency of HPV during pregnancy (28-31%) compared with non-pregnant women (12.5-18.6%) [18,43]. R. \_ Rando et al. [39] noted an increase in HPV - positive patients from the first trimester (20.9%) to

the third trimester of pregnancy (46%) and a significant decrease after delivery (17.5%). During pregnancy, the processes of metaplasia of the cervical epithelium are activated, and as is known, the cervical epithelium is most sensitive to HPV infection during metaplasia. Another explanation for the high detection rate of HPV during pregnancy may be hormonal changes that play a role in stimulating HPV replication and making detection during pregnancy more accessible. In addition to HPV infection, lack of regular cytological screening is an important factor in the risk of developing invasive cervical cancer. Young women, both outside of pregnancy and during pregnancy, should undergo routine cytological screening. According to J. Lurain, D. Gallup, on average, 1.3 - 2.2% of obstetric patients have cytological atypia.

The main symptoms of cervical cancer during pregnancy are: vaginal bleeding - 68%, and which is most often regarded in the first trimester as a threatened miscarriage, in the second and third trimesters - as placenta previa or premature detachment, and after childbirth - a complication of the postpartum period; leucorrhea - 10.2%; pain - 7.1%, in 14.5% there are no complaints. The time to establish a diagnosis of cervical cancer during pregnancy from the onset of the first symptoms varies from 1 to 12 months. The reasons for the neglect of cervical cancer in pregnant women are: the lack of research when taking pregnant women into the dispensary or preparing them for artificial termination of pregnancy; in the presence of bloody discharge from the genital tract, the cervix is not examined, smears are not taken for cytological examination; misinterpretation of the clinical manifestations of cervical cancer during pregnancy; fear of a biopsy from the eroded vaginal part of the cervix during pregnancy; incorrect sampling of material without colposcopic control; lack of oncological alertness in patients with precancerous changes in the cervix [22,27].

Thus, cervical cancer is a common and dangerous pathology that affects women of young and childbearing age. This fact is becoming a leading one, since it is a problem not only of a medical, but also of an economic and state nature, since it directly affects demographic indicators.

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