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MODERN VIEW ON THE PREVALENCE OF COLORECTAL CANCER

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Abstract

In the 21st century, tumors are becoming one of the main problems in the field of medicine, and if you look closely at the statistics, from year to year the incidence of malignant neoplasms (MN) is increasing compared to benign ones. The issues of diagnosis and treatment of cancer in the early stages remain relevant today throughout the world. In addition, there is no full-fledged algorithm that answers all the questions regarding the management of patients with such serious complications

as acute obstructive intestinal obstruction, intestinal perforation due to tumor disintegration, and bleeding from the tumor.

Keywords: Colorectal cancer, diagnostic methods.

Introduction:

According to some authors, conducting an in-depth epidemiological analysis of cancer, based on localization in the anatomical region and histostructure, can be carried out only on the basis of indicators from population registers, i.e. from the moment the primary registration of a malignant tumor is made until death. These indicators are collected from all over the world from population-based cancer registries; this procedure makes it possible to conduct a comparative analysis of morbidity and mortality rates [Kachanov D.Yu. et al. 2009, Fairley T.L. et al. 2016].

Conducting a comparative analysis based on data from population-based cancer registries is possible based on territorial coverage, i.e. can be regional or national [Cancer registry of Norway, 2013; Scottish bowel screening programme, 2013], global [Ferlay T.L. et al., 2016].

Based on global statistics, one can find out the annual increase in cancer incidence: the number of newly diagnosed cases is about 12 million annually, and the mortality rate from cancer is more than 6.5 million, when the growth rate is more than 2%, which exceeds 0.5% growth world population [Navruzov S.N. et al. 2020]. Based on data from the World Health Organization (WHO), the fatality rate in 2012 was 8.2 million, while the projected fatality rate was 1.7 million, i.e.

According to world statistics, we can say that the share of lung cancer is 11.6%, breast cancer 11.6%, colorectal cancer 10.2%, prostate cancer 7.1%, stomach cancer 5.7%, liver cancer 4.7%, esophageal cancer 3.2%, cervical cancer 3.2% and the share of other malignant neoplasms 42.9%.

Also, based on world statistics, mortality from cancer shows that lung cancer accounts for 18.4%, breast cancer 9.2%, colorectal cancer 8.2%, prostate cancer 8.2%, stomach cancer 6.6 %, liver cancer 5.3%, esophageal cancer 4.5%, cervical cancer 3.8% and the share of other malignant neoplasms 35.8%.

According to some authors, the incidence and prevalence of colon cancer in Asian and African countries ranges from 2 to 5 cases per 100,000 population, while in Western Europe and the USA these figures are several times higher, amounting to 40-45 cases per 100,000 population. In recent years, mortality in developed countries such as North America, New Zealand, Australia and Northern Europe has

been decreasing, and in Eastern Europe the incidence of colorectal cancer is increasing by 5-15% [Lebedeva L.N. et al. 2016].

The lifetime risk of developing colon cancer in the United States is approximately one in 20 (5%) and varies depending on individual risk factors (American Cancer Society, 2010).

In 2019, 24,648 cases of newly diagnosed malignancies were registered in the Republic of Uzbekistan, including 10,511 (42.6%) in male patients and 14,137 (57.4%) in female patients. By the end of 2019, the number of registered cancer patients was 103,063, i.e. 0.3% of the country's population.

In 2019, 1,588 new cases of colorectal cancer were registered in the Republic of Uzbekistan, including 883 (55.6%) cases in men and 705 (44.4%) cases in women. In the overall structure of cancer incidence, CRC ranks 5th with an incidence rate of 4.8 per 100 thousand population [Tillyashaikhov M.N.].

Depending on age, the incidence of colon cancer in patients under 15 years old was 0.12%, 15-17 years old - 0.22%, 15-44 years old - 14.3%, 45-64 years old - 51.9% and in persons over 65 years old amounted to 33.5% [Navruzov S.N. et al. 2020]. This shows that it is people of working age who are most susceptible to colon cancer.

It is worth noting that in the structure of morbidity among the male population, colorectal cancer ranks 3rd with an incidence rate of 5.3 per 100 thousand male population, second only to cancer of the lungs and stomach, and among women it ranks 4th (4.3 per 100 thousand). thousand female population) after cancer of the breast, cervix and ovary.

When studying the age-specific incidence rate, it was revealed that up to 70-74 years of age there is a constant increase in the incidence of colorectal cancer in both men and women. However, after 75 years there is a sharp decrease in this indicator. Perhaps this indicates that after 75 years, the true cause of morbidity in older people is not sufficiently studied.

The number of patients with colorectal cancer in 2019 amounted to 5.2% of the total number of patients with cancer registered in the republic, i.e. 5312 patients with colorectal cancer were registered at the dispensary by the end of 2019 40 613 (39.4%) patients (in 2018 - 39.0%) among all patients with MN who were under observation in oncology institutions were registered for 5 years or more. At the same time, the proportion of patients with colorectal cancer who were observed for 5 years or more from the moment of diagnosis, of the total number registered with this diagnosis in 2013 was 34.9%, in 2015 - 32.8%, in 2019 - 35.0%.

The proportion of identified patients with colorectal cancer in the early stages is steadily increasing, and the number of advanced cases of this disease (stage IV) is

decreasing. If in 2015 there were 28.1% of patients with stages 1–11, then by 2019 the proportion of patients in whom CRC was verified in the early stages increased to 43.5%.

Based on this, we can say that colorectal cancer ranks 3rd in terms of mortality from cancer, and 2nd in terms of prevalence. The frequency of occurrence is observed in persons over 40 years of age and is most often detected over the age of 65-75 years [GLOBOCAN data for 2018].

There are three models for the dynamics of morbidity and mortality in colorectal cancer:

1. Western – high stable or decreasing morbidity level, decreasing mortality rate, large gap between morbidity and mortality rates. This model is typical for economically developed countries.
2. Eastern European, high morbidity and mortality rates, both of these indicators are growing and differ little from each other. This model is typical for countries with limited health resources and infrastructure.
3. Characteristic of countries with a low and very low level of economy is a low level of both morbidity and mortality, both indicators are almost identical in value [Lebedeva L.N. et al. 2016].

In Uzbekistan, colorectal cancer ranks 4th among all malignant neoplasms and colon cancer accounts for 2.58%. Depending on age, the incidence of colon cancer in patients under 15 years old was 0.12%, 15-17 years old - 0.22%, 15-44 years old - 14.3%, 45-64 years old - 51.9% and in persons over 65 years old amounted to 33.5% [Navruzov S.N. et al. 2020]. This shows that it is people of working age who are most susceptible to colon cancer.

In the USA, colorectal cancer is more common between the ages of 20-49 years and is one of the 10 most common cancers among men and women [Fairley T.L. et al. 2016]. In Russia, in people under 50 years of age, localization in the colon occurs in 6.8% of cases, and cancer localization in the rectum, rectosigmoid region and anus accounts for 8.0% of cases [Kaprin A.D. et al. 2015].

Incidence rates increase sharply after age 50, with the highest rates in the 85+ age group [Bowel screening Wales, 2013; NHS screening programme. 2013; Northern Ireland bowel screening programme, 2013; Scottish bowel screening programme, 2013].

Colorectal cancer, according to S.N. Navruzov. et al. (2020), can be divided into 3 distinct disease entities: colon cancer (CC), rectal cancer (RCC), and anal canal cancer (ACC). According to GLOBOCAN data for 2018, the incidence of RTC was 59.3%, RTC 38.1% and CANCER 2.6%, and the mortality rate from RTC was 62.6%,

RTC 35.2% and RAC 2.2%. The incidence-to-fatality ratio among men and women was 1.25:1.00 and 1.22:1.00, respectively.

According to Fedorov V.E. et al. (2017) colorectal cancer is divided into colon cancer and rectal cancer. The ratio of occurrence among men and women is 1.21:1.00.

In developed countries, the ratio of the incidence of colon and rectal tumors is 2:1, in developing countries this ratio is 1:1 [Zalit N.Yu. et al. 2016].

According to the histological form of colorectal cancer, up to 90% of cases are adenocarcinoma, which originates from adenomas (adenomatous polyps), 6-19% of cases are mucus-forming tumors, which are the most aggressively ongoing, the least common are mucinous tumors [Mogoanta S.S. et al. 2014, Fleming M. et al. 2012]

Colorectal cancer is most widespread in East Asia and amounts to 39.8%, while in Northern Europe it reaches 4.1% and, accordingly, mortality is most widespread in East Asia - 36.9% and least in West Africa - 1%.

The International Agency for Research on Cancer gives such indicators that the highest incidence of colorectal cancer is associated with lifestyle and diet, which is why in North America, Japan, and Europe its level remains high, and the low incidence is associated with delayed diagnosis and low economic level countries.

The American Cancer Society provides evidence that the highest incidence rate is in Asia (Japan, Kuwait and Israel) and Eastern Europe (Czech Republic, Slovenia and Slovakia) this is due to the prevalence of risk factors for its development. According to a number of authors, the level of morbidity and mortality indicators shows a high or low level of risk factors for colon cancer and predicts life expectancy [Fox R. 2017, Lebedeva L.N. et al. 2016].

The incidence of colorectal cancer in 50% of cases depends on lifestyle and the effects of carcinogens, 5-20% depends on genetic factors.

One of the main reasons for the increase in incidence, which is directly related to risk factors for colorectal cancer, are: age over 50 years, smoking, alcohol abuse, excess consumption of red meat, low consumption of whole grains, fruits and vegetables, physical inactivity, obesity, genetic syndromes, adenomatous colon polyposis, inflammatory bowel disease, family history, previous breast or female genital cancer, type 2 diabetes [Aliev F.Sh. et al. 2016, Guseinova Z.K. et al. 2015].

The risk of developing colorectal cancer increases by 11% in women and 9% in men with every 5 cm increase in height [Wiren S. et al. 2014].

According to a number of authors, one of the most dangerous complications of colorectal cancer is acute obstructive intestinal obstruction, which ranges from 30 to 85.5%, the incidence of other complications, such as intestinal perforation due to tumor decay is 0.4–27%, bleeding 0 ,8–18%, tumor invasion into neighboring organs

and tissues 1.5–44%, perifocal purulent-inflammatory processes 5–35% [Denisenko V.L. et al. 2015, Meshkov A.V. et al. 2015].

Of the initially diagnosed colorectal cancer, 20-50% of cases have metastases. Most often, metastases in colorectal cancer are located in the liver, of which only 10-25% are resectable, and less often metastases are localized in the lungs and peritoneum [American Cancer Society 2016].

According to the SEER-Medicare database, localized stages occur in 36-42%, regional metastases in 34-41%, and distant metastases in 17-25% of patients, depending on gender and race.

Life expectancy for colorectal cancer depends on the extent of the tumor and the presence of metastases. At stage I, the five-year survival rate is 93%, at stage II of the disease, the five-year survival rate decreases to 72%, at stage III, survival does not exceed 45%, at stage IV, the five-year survival rate is 8% [Osipov V.A. et al. 2014]. According to the American Cancer Society (2016), at stages I and II the five-year survival rate is 90%, at stage III – 70% and at stage IV – 13%.

Conclusion:

The analysis of the prevalence of colorectal cancer shows a steady increase in morbidity and mortality depending on the location and histological structure of the tumor, gender, age and territorial characteristics. Considering the advanced stage at the initial detection of the tumor, the issue of diagnosing colorectal cancer in the early stages remains relevant. Improving the early diagnosis of colorectal cancer will improve survival rates and the standard of living of patients.

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