

Multiple Primary Cancer: Genetic Pathomorphological Factors of Endometrial and Breast Cancer

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Abstract: In this article, the results of detailed research on the genetic pathomorphological factors of multiple primary cancers: endometrial and breast cancer are presented. Also, the article provides detailed information about breast cancer, which ranks first in the world according to the index of female scientists, the causes of breast cancer, and the use of a new approach to treatment. Our new ideas and opinions about the treatment of patients with the combined use of radiotherapy and chemotherapy are presented.

Key words: endometrial cancer, breast cancer, genetic pathomorphological factors, mammography, hormone therapy, low breastfeeding, genetic predisposition, screening centers.

Introduction

As in the world, in Uzbekistan, breast cancer, followed by cervical cancer, is the most common cancer among women of all ages. Among women of all ages, breast cancer, stomach cancer, and cervical cancer are the third leading causes of death from diseases. Breast cancer is the most common tumor disease. According to medical statistics, 10% of women around the world are infected with this disease, especially women living in European countries. In most cases, cancer is observed in people over 45 years old. In developed countries, this disease has decreased slightly, due to the invention of modern tests for the diagnosis of the disease and the effectiveness of treatment measures. Even so, the tumor is made up of different types of cells and their growth rates, so the treatment of the disease is difficult. The disease develops slowly, without symptoms for a long time, and in some cases, the disease can develop rapidly. Effective treatment of breast cancer is possible only in early detection. According to statistics of the World Health Organization, breast cancer is the second most common cancer after lung cancer, and the first among cancers that cause women's death. Every year, 800,000 - 1,000,000 new cases of the disease are recorded in the world. According to scientists, the risk of breast cancer is especially high in the age group of 50-60 years and is 70%. 1 out of every 12 women worldwide suffers from this disease [1]. This disease has not spared men either. The probability of meeting in men is 0.5-1%, and 15% of the causes of the disease in them is genetic predisposition.

Also endometrial cancer is one of the most common female gynecological malignancies and can develop in normal, atrophic, or hyperplastic endometrium. About 75% of endometrial cancer is detected at stage I of the disease, when the tumor is located only inside the uterus, which in itself has a positive oncological prognosis [12]. However, it is noteworthy that there are exceptions to the general pattern of the course of endometrial tumors. Cancer of the body of the uterus is a morphologically heterogeneous tumor and is predominantly (>80%) represented by endometrioid forms of the disease, which are characterized by a favorable course with a 5-year survival rate of up to 90% [8]. The share of rare endometrial tumors accounts for only 15-20%, however, it is this group that is responsible for the largest number of relapses of the disease (50%), and the 5-year survival rate of these patients does not exceed 40% [2,7].

Research methodology

The situation in developed countries regarding breast cancer is as follows: For example, in Japan, like all countries, we can observe many progressive and regressive processes of the disease. In Japan, one in every 39 women is affected by this disease. In particular, for every 10,000 population, the average number of 50-54-year-olds was 19 in 1985-1989, 21 in 1990-1994, 29 in 2000-2004, and 27 in 2010-2014. . The risk of developing the disease increases with age [21]. It is known that now the disease occurs even among 11-13-year-old teenagers due to its "young age". According to the data, American and Japanese women are more likely to get cancer. Americans consume more saturated fat and alcohol. Japanese people lose a lot of time because they want to have children late [2]. If we turn to France, in the 1980s the incidence of this pathology was 21%, in 2005 it was 42%, and by 2013 it was about 53%. It is 15 per 100,000 women. If detected in the early stages, 99% of cases can be treated. It should be noted here that the risk of breast cancer decreases by 7% with each pregnancy, especially long-term breastfeeding further reduces the development of the disease. Although there are various reasons for the origin of cancer, the main place is occupied by genetic predisposition and hormonal changes, especially as a result of the influence of estrogenic hormones, the risk of tumor origin is high.

Risk factors that lead to the appearance of tumors:

Having a family history of tumor disease;

Early onset of menstruation (before age 12) or late onset of menopause (after age 55). These are explained by the activity of the estrogen hormone [13];

Tumors that appeared in other organs of the body;

Various genetic factors;

The risk of developing breast cancer is high in nulliparous women and women whose first pregnancy is late (after 35 years);

Exposure to radiation, such as radiation therapy, repeated X-ray examinations, living and working in environmentally negative areas;

Low activity lifestyle;

Harmful habits: drinking alcohol and smoking;

Taking uncontrolled hormonal contraceptives, long-term hormonal therapy;

The risk factors listed above do not directly cause a tumor, but simply increase the susceptibility to the development of cancer. In addition, not all tall and fat women get cancer. Of course, not one, but several factors play a role in the origin of breast cancer [3].

Research methods

Today, breast cancer is one of the oncological diseases that is very relevant not only in Uzbekistan, but also in the whole world. Breast cancer is the leading cancer in women in terms of incidence and mortality rates. According to statistics, this disease can threaten one in ten women. The good news is that if the disease is detected early, it can be cured in 90 percent of cases. Breast cancer is a disease caused by hormonal changes, so all hormonal changes in a woman's body can lead to this disease. It is also caused by related diseases, for example, uterine fibroids, cysts, diabetes, various hepatitises, and thyroid diseases. Menstrual cycle disorders, such as early or late menstruation in some girls, as well as late onset of menopause, also play an important role. Abortion, not breastfeeding after giving birth, and not having children for a long time after marriage lead to hormonal changes. This, by itself, can cause the above disease.

Mastitis is inflammation of the mammary glands as a result of long-term retention of milk and infection (1-figure). Therefore, lactating women should practice hygiene as much as possible and breastfeed on time. If for some reason she cannot have a baby, then the woman should breastfeed herself.

Figure 1.



Figure 1. Mastitis is an inflammation of the mammary glands as a result of prolonged milk retention and infection

Most often, the disease occurs in older women aged 50-70. But today he is getting very young. It is found even in 25-30-year-old women.

Cervical cancer is caused by a virus, while breast cancer is caused by hormonal changes. Therefore, the practice of vaccination does not correspond to this disease.

But breast screening is possible for prevention. Therefore, to detect this disease in the early stages, our women should undergo a mammography examination once a year. Because in these tests, it is possible to determine stages that cannot be detected by touch in calcinate state.

Therefore, women should do self-examination 1-2 times a month. This should be done in front of a mirror in the bathroom [5].

The first stage: in the 1st case, both breasts are compared with each other by placing the hand on the side, checking whether there are any changes; In case 2, placing both hands behind the head, it is determined whether there is a change in the chest; In the 3rd case, bending forward a little, putting his hands on the waist, it is determined whether there is a change in the chest.

The second stage: one hand is raised up, with the middle three fingers of the other hand, the chest area is checked everywhere. Normally, it should be soft and smooth, and everywhere should be the same. Then the underarm areas are also checked in a rotating position. At the end, the nipple is squeezed and it is determined whether there is a separation or not.

Third stage: The woman lies on the floor and puts a pillow under her shoulders and puts one hand behind her head and uses the middle three fingers of the other hand to examine her breasts in a small circle.

Early stages can be detected only by mammography and ultrasound examinations. But if a woman has the following changes, it is necessary to go to a mammologist immediately, because these conditions indicate the development of breast cancer: changes in the color of the skin of the breast, hyperemia or pigmentation, swelling, glandular formation, the transition of the skin to a state similar to orange peel, rashes similar to dermatitis, bloody and brown. separation of color, some hard lump when palpated, indentation of the nipple, etc.

As a result of the research, it can be said that there are two types of treatment: local and general. It depends on whether or not the cancer cells have spread to other organs. If it has not spread, then we are limited to surgical or radiation therapy. But if it has metastasized, that is, it has spread to other organs, then chemotherapy is a more effective method.

Surgery can be performed in two areas: 1) in the breast tissue itself; 2) in the area of the axillary lymph nodes. Surgery is aimed at removing all cancer cells as much as possible. There are two types of this practice. In the first one, part of the breast is preserved. The second is a mastectomy, in which the entire breast is removed.

In 60-70% of cases, breast cancer can increase under the influence of hormones. These are the sex hormones estrogen and progesterone in women. Due to this, by reducing the amount of hormones in the blood, it is possible to achieve good results in this disease.

As a result of research, it was found that hormonal therapy manifests itself in three directions:

In method 1. Drugs that target the cancer cells themselves. Such drugs reduce the sensitivity of tissues to estrogen.

Method 2. Reduces estrogen in the blood.

Method 3. Is to reduce estrogen production in the ovary.

It can also be done surgically, that is, by removing a part of the ovary. These hormonal therapy drugs are in pill form and must be taken for at least 5 years.

Analysis and results

It is also very necessary for the doctor to insert the needle correctly and accurately during the biopsy in order to study the scientific research work and to find the solution according to the disease condition (2-figure). Because after the ultrasound, a histological examination, i.e. a biopsy, is performed to find out the type of cancer and its stage. An MRI may also be done after a cancer diagnosis. Through this examination, it is possible to know the changes in and around the tissue and to know more and more about the cancer in general. MRI can help the doctor to choose the right treatment method. This method of inspection is not always considered necessary.

Figure 2

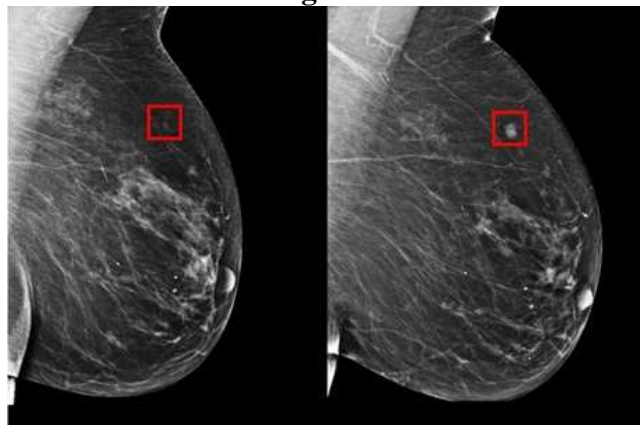


Figure. 2. Breast in mammography

Unfortunately, the choice is often made between the mother and the child. Again, it depends on the month of pregnancy and the stage of the disease. If the pregnancy is 8-9 months, and the disease is in the early stages, it is possible to wait until the child is born, and then deal with the mother. If the pregnancy is 1-2 months, abortion is recommended and the mother is treated [9]. Of course, after 4-5 years, after full recovery, she can have a child. It is necessary to change the way of life, of course. It will be necessary to control body weight and not gain excess weight, to be more physically active, to eat proper and high-quality food, to avoid harmful habits and alcohol. He should take his medicine regularly on time. It is completely wrong to say that I have recovered and I can stop drinking.

There is no clear recommendation that if you do this, you will not get this disease at all. The result of scientific research shows that if our women follow the following recommendations, they will prevent the disease. These may seem like general statements to many.

But these things have been proven to reduce the risks:

1	• physical activity;
2	• increasing consumption of vegetables and fruits;
3	• reducing calories;
4	• healthy weight;
5	• abstinence from alcohol.
6	• physical activity;

Conclusion

If we follow the above practices, we can detect the disease at an early stage, diagnose it early, and save the lives of patients in 90-95% of cases. Research shows that early detection of the disease is the most important factor. The concept of 5-year survival rate is widely used in cancer treatment. The higher the number, the higher the chance of recovery [11].

Treatment of breast cancer in modern medicine includes surgery, chemotherapy and light therapy, hormonal and immunotherapy. Treatment measures for this disease are individual for each woman and consist of a complex of several methods. By surgery. This is one of the main methods of treatment. Depending on the location of the tumor, the breast can be preserved or removed completely. This is done by the attending physician [12]. The main treatment of the disease is surgery. Modern surgical procedures are aimed at preserving a healthy breast and its parts as much as possible. Chemotherapy and radiation therapy are usually prescribed after surgery.

There are several types of operations performed by a surgeon-oncologist:

Radical excision - "radial" excision of the mammary gland with subcutaneous fat layer and lymph nodes;

Radical mastectomy - complete removal of the breast along with lymph nodes. In internal medicine, this practice is rarely used;

Quadrantectomy - removal of the formed tumor with surrounding tissues within a radius of up to 5 cm. This method is effective in the early stages of the disease;

Lumpectomy is a small surgical intervention, removing only the tumor itself and the lymph node.

Radiation therapy in breast cancer

Radiation therapy in tumor disease can be performed before surgery, during surgery, after surgery, and independently. Preoperative radiation therapy is designed to destroy the tumor cells as much as possible, making the operation easier.

Postoperative radiation therapy is performed to prevent recurrence of the tumor. The goal of radiation therapy during surgery is to preserve a healthy breast as much as possible. If there are contraindications to surgery, light therapy is performed independently. In addition to remote therapy, light therapy can also be performed internally, i.e., on the tumor itself. In addition, light therapy is also performed on the lymph nodes [13].

In the treatment of medicamentosis, cytostatic drugs are used to stop the growth and destruction of tumor cells. Due to the large number of side effects of these drugs, medicamentose treatment is prescribed only according to strict instructions. Chemotherapy. Various chemical drugs are used. It is often used as an adjuvant before surgery or to prevent disease recurrence after surgery. It is usually used for 3-6 months. Finally, it has a toxic effect on the body. Formation of blood leads to disruption of immune processes, loss of hair, eyebrows and eyelashes.

Radiotherapy. In this method, the tumor is irradiated with powerful X-ray-like devices [14]. This auxiliary method is prescribed to prepare for surgery after or before surgery so that pain does not return. Unlike chemotherapy, it is not so toxic, but it is a complex method that cannot always be prescribed. To date, breast cancer is the best-studied disease among all tumor diseases. It can be effectively treated if detected early. Individual prognosis is determined depending on the size, location, development level and other criteria of the tumor. A positive result can be achieved in tumors that are more sensitive to hormones, because in this case, the tumor is kept in a precancerous state for a long time. The prognosis of tumor disease is also determined by its metastases. Research shows that if the number of breast cancer metastases is more than 4 lymph nodes, the treatment is less effective [15].

The treatment effect is more positive in local metastases than in hematogenous metastases. The most dangerous is the spread of metastases to distant organs. In addition, the index of oncomarkers plays an important role, its increase increases the risk of metastases and recurrences. Survival in breast cancer is 55%. If adequate treatment measures are not taken, this figure is 10% [13]. Many factors affect the level of survival. If the survival is determined according to the tumor stages, it is 95% in the initial stages of the tumor. In the second stage, when the tumor is up to 5 cm, the viability of tumor cells metastases to two lymph nodes is 55-80%. Survival rates for stage III and IV cancer are 10-50% [12]. But nevertheless, timely detection of the disease, its treatment, simultaneous operation and chemo-radiotherapy, strict adherence to the doctor's recommendations and leading a healthy lifestyle allow to overcome this disease to some extent.

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