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The attitude of women in Russia to the prevention of breast cancer and ovarian cancer: results of a sociological survey.

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ABSTRACT

Breast cancer and ovarian cancer are among the most common causes of death for women in Russia. It has been found that women with BRCA1 and BRCA2 gene mutations are at high risk of developing breast cancer and ovarian cancer, so it is relevant to determine the nature of BRCA genes in the human genome for the prevention of cancer. The article presents the results of a sociological survey of women of the Republic of Tatarstan (Russia) to determine the level of their awareness of the risks of cancer development, the demand for carrying out the genetic tests to identify the predisposition to the breast cancer and ovarian cancer, and the motives of acceptance or rejection of the existing methods of diagnosis and prevention of oncological diseases. The method of collecting the empirical data was the semi-formalized interviews. The analysis revealed the need and demand for targeted integrated measures aimed at promoting the healthy lifestyle, at informing about the methods of precaution, treatment, and prevention of oncological diseases.

Keywords: Self-preservation behavior, genetic analysis, mutations of BRCA1 and BRCA2 genes, sociological survey, breast cancer, ovarian cancer.

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INTRODUCTION

The oncological diseases today are one of the important factors of an increase in the mortality rate, a decrease in the quality of life and an increase in the burden on the health system budget [1, 2]. According to statistics, the breast cancer is among the five most common causes of death for women in Russia. In the structure of women mortality, the breast cancer percentage amounted to 17% and ovarian cancer amounted to about 5% [3]. The breast cancer has also become a major cause of death from malignant tumors in women aged 40 years old and older [3]. Despite the fact that mortality from this type of oncological diseases in Russia decreased by 15% in 2015 [4], the sociological surveys show that almost 70% of Russian women are still careless about their health [5]. Thus, the high level of awareness about the problem of breast cancer and ovarian cancer of Russian women is combined with a lack of desire to have regular diagnosis [5]. However, the early diagnosis is the key to successful treatment of this disease. Health is an integrated measure of the biological, socio-cultural and economic processes taking place in the society [6]. The oncological disease today has not just a physical manifestation, but also mental and social one [7]. Therefore it seems urgent to study the reasons that motivate or hinder the practices aimed at maintaining the women health. It is possible to explain the willingness or unwillingness to care about one's health by using a sociological term "self-preservation behavior", which broadly implies the actions and attitudes aimed at protecting health over the entire life cycle [8]. In a narrow sense, this definition is used for the analysis of specific behavior practices of the individual.

This study is focused on young women (up to 25 years old), mainly with higher education. It is assumed that women with higher education are more informed about the benefits of early diagnosis of oncological diseases, and can also reflect on the case of their willingness or unwillingness to devote time to their health and diagnostic procedures. The link between the level of education and health of the individual is also noted by other researchers [9].

Thus, the determination of reasons, by which the practices of self-preservation behavior, in particular, the commitment to the early diagnosis of cancer, cause a mixed reaction among women in Russia, is a vital topic for research. The study of factors influencing the willingness to diagnosis and treatment of breast cancer at an early stage will help to develop more effective scheme of health care for women with this disease. Only on the basis of a comprehensive interdisciplinary approach and by uniting the efforts of specialists in various fields there is a chance to identify the totality of causes determining the risk factors of development of the oncological diseases, to obtain a reliable information about the ongoing processes, attitudes and orientations of the population, to find the best ways of "health improvement" in the region.

MATERIALS AND METHODS

The research method is a semi-formalized interview. The research sample included 2100 women aged 25-55 years old. Sample type: quota focused; the most part of respondents (63%) included women up to 25 years old. Thus, the research focus is focused on such demographic group as young women with higher or incomplete higher education. A large representation of young women in the sample is due to the hypothesis of the study, as well as topical issues of early diagnosis of oncological diseases among young people.

Awareness and attitude towards early diagnosis. The majority of survey participants (82%) know that there are genetic factors of occurrence of breast and ovarian cancer - it indicates a high level of awareness about the disease. The majority of respondents (75%) noted that they or their relatives were not faced with the breast and ovarian cancer.

From the point of view of our methodology, it is possible to estimate the prevalence of practices of self-preservation behavior by analyzing the frequency of preventive visits to specialists able to diagnose the disease. Regarding the subject of our research, it means the visit to an oncologist and a gynecologist. According to the data received, 71.3% of women surveyed visit a gynecologist once a year or more, 27% - just once in a few years, and only 0.9% have never been at the gynecologist. The picture is opposite with the visit to the mammologist - 50.1% of the respondents have never been at the examination. Most likely, such a high percentage of those who have never been at the mammologist is associated with a predominance of respondents up to 25 years old in the sample, which are often not covered by the organized visit to the mammologist (for example, in professional examinations). The main part of those respondents, who have

been at the mammologist, visit it once every few years (31.3%). Only 18% visit this specialist once a year or more. Thus, the majority of young women regularly visits a gynecologist, but has never been at the mammologist examination. In order to assess the readiness for the early diagnosis and treatment of cancer, the respondents were offered the question of their attitude towards the possibility of making a genetic test for the presence of specific mutations in the genome that determine the risk of developing of breast and ovarian cancer (BRCA1 and BRCA2 gene mutations). Most women - 85% - would like to do a genetic test to identify mutations in the genes, while 90% are ready to pay for such an examination. It was difficult to answer this question for only 11%. The number of those, who do not want to do it, was only 4%. An analysis of the statements of the open-ended questions leads to the following conclusions:

Firstly, most of the refusals of examinations are due to the confidence in the senselessness and (or) hazard nature of the analysis. The senselessness is associated with the absence of 100% accuracy, and the hazard nature with the fact that, knowing about a predisposition, the woman will have more to worry about, thus "programming" herself on the disease. Second, the respondents, having spoken against the need for genetic testing for a predisposition to the breast and ovarian cancer, do not always understand that the research is preventive in nature and is not associated with the identification of a specific disease, but only the factors to its predisposition. The vast majority of respondents (83%) are ready to recommend undergoing the genetic test to their families, if they have a risk genetic mutation; 8.3% did not answer this question.

Attitude to the preventive operation. Most women are not ready to undergo a preventive surgery to remove a potentially dangerous body. More than 1/5 of respondents had difficulties in answering this question; however, 31% of respondents were not ready for such surgery.

The semantic groups of answers to the open-ended questions about the reasons of unwillingness to undergo the preventive surgery (41% of total respondents) are concentrated in a few areas: "Rejection of surgical removal of a still yet healthy body at just the potential threat (70% of risk is not enough)" and "Confidence in the effectiveness of non-surgical methods of treating cancer with early diagnosis", and "Unwillingness to remain an "aesthetically inferior". The presence of these estimates suggests a low level of awareness about the surgery nature, as well as the opportunities (often inaccessibility) of aesthetic reconstruction of a body (breast) after removal. Many respondents pointed out that they were afraid to stand alone without the support of qualified professionals, if they had to go through such a surgery.

In our opinion, it is also significant the statements relating to the lack of sufficient awareness about the features, advantages and disadvantages of prophylactic surgery. Some part of the respondents are ready to make a preventive surgery upon reaching a certain age, provided the breast reconstruction and available hormone replacement therapy (at the removal of the ovaries). The presence of such a group of statements, as fear of occurrence of metastasis after the preventive surgery, indicates a low level of awareness of some portion of the respondents about the oncological diseases and features of their treatment. It is also a significant group of those, who have fear of the medical procedures in general.

CONCLUSIONS

The degree of women's awareness about the existence of a genetic predisposition for breast cancer and ovarian cancer is high enough: 80% of respondents in the general survey and 83% - in the university survey. However, the nature of this knowledge is not clear: we do not know what is known to the respondents, and what is not. The visions of genetically transmitted risks may only be the result of domestic understanding of a set of cases in everyday life, when people are faced with the oncological diseases, either directly or indirectly. It is necessary to take the targeted integrated measures aimed at promoting the healthy lifestyle, at informing about the methods of precaution, treatment, and prevention of oncological diseases. These measures shall be implemented both through the network of medical institutions and through the mass media and social networks (thematic articles, TV shows, initiation of events dedicated to the year of fight against cancer, interviews with the women faced with cancer, etc.).

A substantial proportion of women, who want to undergo a genetic test to identify the mutations in the genes: 81%. However, this figure does not mean that all these women are ready to go on a genetic analysis at the earliest opportunity. It is necessary to make a serious work to promote this kind of analysis. It can be assumed that women distinguish the situations where the test is necessary for them (close relatives are ill or

have died of breast or ovarian cancer), and situations where they have no reasons to suspect a predisposition to such disease. The respondents, who refuse of genetic testing to identify a possible predisposition to the breast and ovarian cancer - 15%, do not always understand that the examination is only a preventive in nature and is not associated with the identification of a specific disease, but only the risk factors.

The issue, related to the payment of preventive procedures in the country with a significant stratification of society on the economic status, deserves a special attention. As a rule, people perceive a kind of "opportunity" (a genetic test, in this case) as a free one, which does not burden and does not take long for the procedure initiated for them by the clinic, enterprise, university. Despite the fact that only 1% of women agree to make a test only under a condition that it will be free, in reality, the unwillingness to spend 500-1,000 rubles can become a serious barrier even for blood donation, not to mention the more serious medical events involving surgery or regular procedures. There is a need for additional survey of the respondents with low income, as it has been a high proportion of unwilling to get information about their genes and conviction in the unavailability of methods of early diagnosis of cancer specifically for themin this group. Most of the refusals of survey are due to the unwillingness to disrupt the peace of mind without good reason (the significant disease symptoms are considered as weighty).

The preventive surgery to remove the bodies is perceived as an undesirable measure by most women. In general, 41% of respondents do not admit any possibility of preventive removal of a body at the identification of genetic predisposition to the disease (38% of respondents admit), but most of them are ready to regularly visit the mammologist to detect a disease at an early stage at the detection of risk genetic mutations.

The main reasons for rejection of the preventive surgery are related to the rejection of surgical removal of a still yet healthy body at just the potential threat (70% of risk is not enough) and the confidence in the effectiveness of non-surgical methods of treating cancer with early diagnosis. It is a significant group of those, who are afraid of medical procedures in general and who are afraid to be "aesthetically inferior" after surgery. This points to the need for greater attention to the health care organization as a whole, initiation of the state programs with financial, organizational and information support, implying, among other things, a set of measures aimed at health education of the population, informing about the possibilities of modern medicine, including the aesthetic reconstruction of a body (breast).

The regular visits to the mammologist are organized only for the respondents of the categories of state and municipal employees and military personnel in the law enforcement bodies, including the police and the FSB (Federal Security Service). The work on the organization of regular visits to the mammologist is not conducted with women of other professional categories, even those employed in the public sector. Most of the young women (about 60%) have never visited the mammologist - this indicates that despite the high level of education and awareness about the importance of early diagnosis of cancer - the majority of respondents do not take independent steps for the early diagnosis (those, who have visited the mammologist, are women older than 25 years old, whose visit has not been initiated by the woman herself, but by the requirements of a medical examination at the place of work), which is contrary to our basic hypothesis.

The main groups of reasons for refusal of preventive surgeries, which have been indicated by the respondents, are: inadvisability of the preventive removal of a healthy body in the absence of a disease, youth, desire to have children and to breastfeed, fear of surgery and complications, distrust of medicine and doctors, unwillingness to lose the main women's bodies, fear of becoming physically unattractive after surgery or treatment, fear of misdiagnosis and fear of being left "one on one" with the disease, to disrupt a "peace of mind", etc.

These data suggest that the majority of respondents are rather ready to conservative treatment methods at a high awareness of the respondents about the possibility of a genetic predisposition to breast cancer and ovarian cancer. However, the early diagnosis, including by means of genetic tests, determines the effectiveness of treatment in many respects. It is necessary to take the comprehensive measures to popularize and promote the methods for early diagnosis and prevention of the oncological diseases, taking into account the specificity of the target audience, its mentality, value orientation, cultural and historical features.

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