



IMPROVING THE EFFECTIVENESS OF TREATMENT OF PATIENTS WITH BREAST CANCER BY OPTIMIZING MODERN METHODS OF RADIATION DIAGNOSTICS

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ABSTRACT

A brief overview of the main methods of breast cancer screening is presented. The effectiveness of mammography as a screening method in reducing mortality from breast cancer is proved, and limitations of the method are indicated. The main trend of increasing the effectiveness of screening is the transition to digital technologies. Properly organized screening with the active participation of the population reduces breast cancer mortality by 30%.

KEYWORDS: breast cancer, screening, mammography

RELEVANCE

Over the past decades, breast cancer has consistently maintained its leading position in the oncological morbidity of the female population and is the leading cause of death of women in economically developed countries of the world, while in recent years there has been a steady increase in morbidity and mortality. The social significance of this form of cancer is so great that research on this problem occupies one of the leading places in modern oncology (Stenina M. B., 2005).

The problem of breast cancer is one of the priorities in oncology. Every year, more than 1 million new cases of breast cancer are registered worldwide. Over the past 20 years, breast cancer has been ranked first in the structure of cancer incidence in women worldwide, and second in terms of the number of deaths (V. G. Ostapenko 2011). In developed countries, breast cancer occurs in 1 in 10 women. In the United States and Western Europe, 8-12% of women develop breast cancer during their lifetime (Cheng H.D., Jigang Li., 2003). In Russia, breast cancer ranks 1st in morbidity in women aged 40-69 years (after cervical cancer) and 70 years and older (after colorectal cancer) (Petrova G. V. et al., 2007). In Belarus, breast cancer occurs with the same frequency as in Russia (41.2 per 100,000 women). In Azerbaijan, Kazakhstan and Kyrgyzstan, the incidence of breast cancer is 1.2-1.9 times lower. From 2000 to 2005, the increase in standardized

morbidity rates was minimal in Kazakhstan (3.4%) and Russia (7.0%), and the maximum – in Armenia (46.0%) (Davydov M. I., Aksel E. M., 2007).

In the Republic of Uzbekistan, breast cancer is also the most frequent and aggressive type of neoplasm in women with a tendency to increase the incidence. The incidence rate in 2005 was 6.3 people per 100 thousand population and ranks first among malignant tumors in women. In the city of Tashkent in 2011, 25.4 cases were detected per 100 thousand population in the Republic of Uzbekistan (Khodjaev A.V., Navruzov S. N., 2011)

ПредраковымиA large number of clinical, morphological, radiological and biochemical studies are devoted to precancerous diseases of the breast – benign tumors, mastopathies, cysts. At the same time, there are a number of controversial and unresolved issues, there is uncertainty in the etiology and pathogenesis of these diseases [3,7].

World statistics indicate that patients with stage I breast cancer have a 5-10-year survival rate of 82 to 92% [4,9]. However, clinical practice shows that the number of such patients does not exceed 11-20% of the total number of breast cancer patients treated. At the same time, the risk of developing breast cancer on the background of fibrocystic mastopathy increases by 4-37 times according to various data [2,4,5,7]. Based on the study of the ratio of proliferating fibroadenomatosis, intraductal and infiltrating breast cancer, it was shown that elements



of proliferating adenomatosis are constantly observed in the tumor growth zone аденоматоза, from пролифератов precancerous proliferates to structures of intraductal carcinoma [2,4]. Studies by V. P. Semiglazov showed that fibroadenomatous background was found in the overwhelming majority of breast cancer patients (from 45 to 60%) of reproductive age and only in 1/8-1/10 of persons older than 50 years [4,9].

OBJECTIVE

To increase the effectiveness of treatment of patients with breast cancer by optimizing modern methods of radiation diagnostics.

MATERIALS AND METHODS OF RESEARCH

The material of the study consisted of 110 first-time patients with breast tumors who were examined in the following conditions: EPA and in conditions from 2018 to 2021 years.

In accordance with the tasks set, all 110 patients with breast tumors were divided into 4 main groups according to the type of disease (Table 1.1).

Table 1.1. Distribution of patients by type of malignated benign tumors, n=110

Group of patients	Number of patients	
	with Abs	%
II. Fibroadenoma with malignancy	71	64.5
II. Malignated KA	15	13.6
III. Sg. in situ	19	17,3
IV. Malignated FFA	5	4.6
Total	110	100.0

As can be seen from Table 1.1, I Group I consisted of 71 (64.5%) patients diagnosed with fibroadenoma with malignancy. Specific ultrasound criteria for malignated fibroadenoma were an uneven contour of the tumor, an inhomogeneous internal structure, and central acoustic attenuation. Fibroadenoma malignancy was characterized by the following morphological changes: areas of intracanalicular proliferation appeared in the epithelium. The epithelium became multi-rowed with the formation of solid and cribriform histological

structures. интраканаликулярной Microscopic foci of cell polymorphism were also detected in the areas of intracanalicular proliferation, many proliferating areas had atypical signs; a lymphoplasmocytic reaction was expressed.

Group II included 15 patients (13.6%) with malignated cystic adenoma (Figure 1.1). X-ray detection of a filling defect or any deformation of the cyst contour during pneumocystography could indicate either cystadenopapilloma or papillary cancer in the cyst.

Table 1.2. Distribution of patients with malignancies benign tumors by age

The patients' age, years	the Number of patients in groups							
	I, n=71		II, n=15		III, n=19		IV, n=5	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%
20	0	0	1	6,7	0	0	1	20,0
21-30	12	16,9	2	13,3	2	10,5	0	0
31-40	24	33,8	3	20,0	5	26,3	0	0
41-50	22	31,0	5	33,3	10	52,6	1	20,0
51-60	8	11,3	0	0	1	5,3	3	60,0
over 60	5	7,0	4	26,7	1	5,3	0	0

The distribution of patients with benign breast tumors with malignancy by age is presented in Table 2.1.2. As can be seen from the Table, the studied contingent of patients is in a wide age range. The majority of patients - 38 (34.5%) - were aged 41-50 years, 32 (29.1%) - 31-40 years, and 16 (14.5%) - 21-30 years.

The distribution of patients by age within the studied groups is shown in Figure 2.1.1. As can be seen from the figure, for fibroadenoma with malignancy, the largest number of patients falls on the age of 31-40 years - 24 (33.8%) patients, and 22 (31.0%) - on 41-50 years. For cancer in the cyst, the largest number of patients was detected in the age



groups 41-50 years-5 (33.3%) and over 60 years – 4 (26.7%). For c-r in in situ the largest number of patients were aged 41-50 years-10 (52.6%), as well as at the age of 31-40 years – 5 (26.3%). In FFA with transition to sarcoma, the majority of patients were aged 51-60 years – 3 (60.0%).

RESEARCH RESULTS

As has been shown in the previous Chapter, the patients were divided into the following groups with the following benign breast tumors: group I - 71 (64.5 per cent) patients with a diagnosis of fibroadenoma with malignancy; group II - 15 patients (13,6%) were diagnosed with malignization KA; group III - 19 patients (17,3%) with a diagnosis of c-r in situ; group IV - 5 patients (4,6%) with malignization FFA. In the majority of patients (83-75. 5%)¹N, the T1N0-1M0 stage of the tumor process was determined by clinical and morphological methods. The control group included 50 patients with the same benign tumors without signs of malignancy: 36 with fibroadenoma, 8 with cystic adenoma, and 6 with PFA. The majority of patients - 38 (34.5%) – were aged 41-50 years, 32 (29.1%) – 31-40 years, and 16 (14.5%) – 21-30 years. When studying the contingent of patients depending on menstrual-ovarian function, it turned out that the majority of patients were at the reproductive age – 75 (68.2%), 20 (18.2%) had menopause for less than 5 years, and 15 (13.6%) had menopause for more than 5 years.

The duration of the disease varied, but the vast majority of women sought medical help in the first 3 months after the discovery of a node in the mammary gland. The duration of the disease up to 3 months was found in 71(64.5%) women, up to 6 months – in 19 (17.3%), up to 1 year – in 12 (10.9%), and over 2 years – in 8 (7.3%) women.

Almost all women – 87 (79.1%) found a node in the mammary gland independently, in 10 (9.1%) patients, the focus of compaction was established during mammographic examination, and in 13 (11.8%) – during preventive individual examination. The majority of patients sought medical help with referral-84 (76.4%), the rest – 26 (23.6%) patients applied independently.

Conclusions. Thus, the most informative clinical method in our studies is ultrasound (detection of the onset of malignancy in 86.3% of cases), followed маммографическоеby mammography (70.3% of cases) and, finally, the primary examination reveals malignancy of a benign tumor in 43.6% of cases. At the same time, in the case of fibroadenoma, the presence of malignancy was determined by ultrasound in 85.7% of cases, mammography-in 73.8% and primary examination-in 47.9%. In кистoadenomeall 15 patients with cystic adenoma (100.0%), ultrasound was used to determine the presence of a malignant process in the cyst, while, mammography was used in 64.2% of cases ,

and initial examination allowed us to suspect malignancy of the cyst in 40.0% of cases. C-r in in situ was diagnosed by ultrasound in 78.9,9%, mammography in 70.5% , and primary examination in 31.6% of cases. In FFA, ultrasound malignancy of the tumor was detected in 80.0%, mammography-in 40.0% , and primary examination-in 40.0% of cases.

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