Ultrasound in the early diagnosis of breast cancer at the level of primary health care

Babakhanova Dinara Safiullayevna
Center for the Development of Professional Qualifications of Medical Workers of the Ministry of Health of the Republic of Uzbekistan
Mamadaliyeva Yashnar Soliyevna
Center for the Development of Professional Qualifications of Medical Workers of the Ministry of Health of the Republic of Uzbekistan
Ibragimov Aziz Yuldashevich
Center for the Development of Professional Qualifications of Medical Workers of the Ministry of Health of the Republic of Uzbekistan

ABSTRACT
The article presents data on the results of preventive examination of patients with diagnosed breast cancer at the level of primary health care, using self-examination and ultrasound. The survey was conducted in 7551 women of Tashkent city and Tashkent region aged 19 to 70 years. Based on the clinical examination and ultrasound examination, 80 (1.1%) patients were diagnosed with breast cancer. Of the 80 patients with breast cancer, 3 (3.75%) had cancer in situ and in 29 (36.25%) T 1 N 0 M 0 was detected. In more than 20% of cases, it was possible to carry out organ-preserving treatment.
Keywords: breast cancer, preventive examinations, primary health care, ultrasound, magnetic resonance imaging.

INTRODUCTION

Malignant neoplasms (MCNO) of the mammary glands are a serious medical and social problem. According to the American Cancer Society, more than 2.3 million new cases of breast cancer (BC) are diagnosed annually in the world, more than 600,000 cases end in a tragic outcome [12]. In Uzbekistan, breast cancer occupies a leading position among all malignant tumors - 11.2 cases per 100,000 population. At the end of 2019, the proportion of cases of breast cancer is 19.4% among registered patients [9]. Despite the emergence of new methods for diagnosing tumors (MRI, CT, ultrasound), the proportion of advanced cases of breast cancer remains high. Among the causes of death of the female population aged 32 to 54 years, breast cancer occupies one of the first places [2 , 6]. This is mainly due to the secrecy of the course in the early stages, the lack of oncological alertness of primary health care doctors, the insufficient qualifications of radiation diagnostics doctors, and the low level of oncological literacy of the population.

The prevalence of breast cancer and the increase in mortality from this disease make the task of its early diagnosis extremely relevant not only in the medical but also in the social aspect, since the disease affects in most cases women of childbearing age who occupy active life

positions [2,4,5]. Among the methods of early diagnosis, mammography, ultrasound, MRI and self-examination are considered the most significant. [3,7,10].

Early-stage breast cancer has a favorable prognosis and high rates of relapse-free and overall survival: in stage I, 95–100% of patients live for more than 5 years.

In recent years, the development of diagnostic equipment has been noted, new highly sensitive methods for examining the mammary glands are being introduced into practice. Digital technologies in radiology have changed approaches and algorithms for early detection of breast cancer.

In radiology, in 2011, the first mammograph with tomosynthesis function was registered . The technology has become revolutionary: it has become possible to obtain a layered image of the mammary glands with a slice thickness of 1 mm. Due to this, the efficiency of mammographic examination increased: it was possible to detect smaller neoplasms against the background of a dense structure of the mammary gland and promptly refer the patient for clarifying diagnosis and treatment [1,3,7,8].

Ultrasound research has switched to 3D technologies, automatic systems for panoramic sonographic scanning of the mammary glands have appeared. The high resolution of modern equipment has made it possible to develop criteria for the early diagnosis of cancer. Using sonography, it is possible to assess not only the details of the structure of breast formations, but also the nature of blood flow, which is important in differential diagnosis [3].

The use of modern contrast agents in X-ray and ultrasound (spectral dual-energy contrast mammography and contrast ultrasound) makes it possible to clarify the features of the blood supply of the identified formations, which can sometimes be the only differential diagnostic criterion in the detection of a malignant tumor [3, 4, 11].

Magnetic resonance imaging is actively used in the diagnosis of breast diseases. MR-mammography allows to determine in time the complications associated with the operation, to identify the tumor process against the background of the implant, against the background of postoperative scars. MR mammography is practically indispensable in determining the prevalence and multicentricity of a malignant process in the mammary gland [3, 6].

MATERIALS AND METHODS

The material of our study was a survey of the female population in various districts of Tashkent (CP of Almazar, Shaykhontakhur, Chilanzar) and Tashkent region (SP, SVP) of Zangiota and Tashkent regions).

The research methods consisted of 2 stages, where at the primary stage a questionnaire on self-examination of the mammary glands was distributed to the female population and an ultrasound examination of the mammary glands was carried out at the second stage. At the level of primary health care, all polyclinics were given ultrasound devices and all specialists were provided with the main ultrasound signs that specialists should have paid attention to when conducting ultrasound diagnostics.

All ultrasound specialists were trained in breast examination. In our observations, the study of the mammary glands was carried out on the ultrasound machines of the company " MINDRAY DS " with a frequency of 7 MHz .

The study of the mammary glands by ultrasound was carried out in 7551 women. Of the 7551 women examined, 80 (1.1%) had breast cancer at various stages.

Our report will analyze 80 patients with breast cancer, which was detected during a population-based in-depth preventive examination of the mammary glands using breast self-examination and ultrasound.

The age of the examined patients was 19-70 years. The average age was 39 years. Most of the patients were between the ages of 40 and 60. Almost all identified patients with breast cancer before the examination did not go to the clinic at the place of residence about the pathology of the mammary glands.

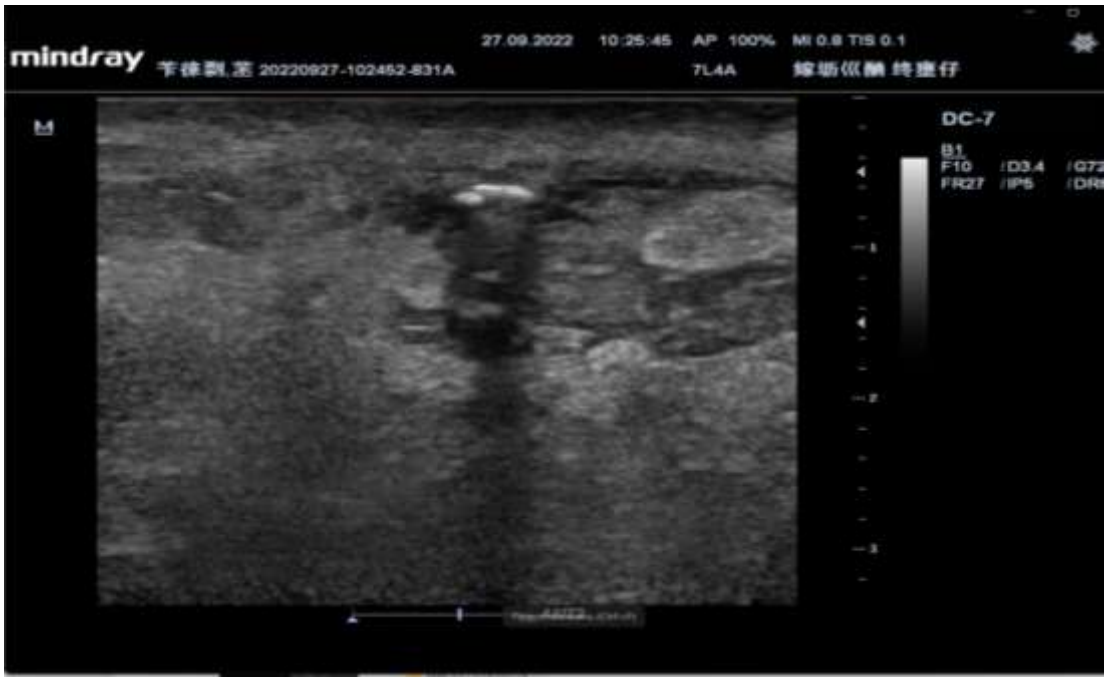
Of the 80 patients, 42 (52.5%) had breast cancer on the right and 38 (47.5%) on the left. Out of 80 patients with breast cancer, 3 (3.75%) had a tumor at an early stage - cancer in sutu , in 29 (36.25%) - T 1 N 1 M 0, in 29 (36.25%) T2 N 1 M 0 and in 1 (1.25%) - T3 N 0 M 0.

All patients subsequently underwent mammography. The examination and diagnosis of breast cancer is confirmed by morphological examination.

RESULTS AND DISCUSSION

One of the advantages of the in-depth preventive examination is that at the level of primary health care it was possible to detect breast cancer in 3 (3.75%) cases Tis NoMO and in 29 (36.25%) cases T 1 N 0 MO stage of the disease. According to the literature, the identification of patients at these stages is a high indicator of the level of primary health care.

Histological examination of 80 patients revealed infiltrative cancer in 63 (78.75%) patients, non-infiltrative cancer in 1 (1.25%), non-differentiated cancer in 1 (1.25%), and non- differentiated cancer in 1 (1.25%) %) - non-Hodgkin's lymphoma of the breast was detected, in (1.25%) - papillary cancer, in 1 (1.25%) - squamous cell carcinoma, in 1 (1.25 5%) - adenocarcinoma, in 1 (1.25%) %) - fibrosarcoma, 3 (3.75%) - intraductal cancer, 4 (5%) - cystadenocarcinoma and 3 (3.75%) - cancer in situ .



On fig. 1 presents the data of ultrasound examination of cancer in situ , where areas of calcification and formation up to 1 cm are clearly visible. The diagnosis is confirmed by mammography

On fig. 2 shows the results of an ultrasound examination of breast cancer and a mammographic picture.

All patients were treated according to the standard of diagnostics and treatment adopted in the Republic of Uzbekistan, in the regional branches of RSNPMTSOiR.

Of the 80 patients with breast cancer, 18 (22.5%) managed to undergo organ-preserving treatment. The remaining patients are under observation after combined treatment of breast cancer.

Conclusion. The analysis showed that ultrasound examination of the mammary glands at the level of primary health care allows to identify various pathologies of the mammary glands and breast cancer. About 40% of breast cancer patients are registered in the early stages (0 and I stages). In 22.5% of cases, it was possible to perform organ-preserving treatment due to early diagnosis of breast cancer.

REFERENCES

1. Becker D. Early detection of breast cancer; the importance of self-diagnosis // Abstracts of the report of the International Women's Forum "Clean and Safe World". Mn., 2000
2. Bulynsky D.N. [et al.] Breast cancer in young people // Siberian journal of oncology. - 2008. - Appendix No. 2 - S. 28-29.
3. Dzhumaev, K. S., & Razhabova, G. K. (2022). Comparative analysis of the relationship of abdominal obesity with physical activity in elderly and senile women. British Medical Journal, 2(1).
4. Djumayev, K.S. Relationship Of Abdominal Obesity With Physical Activity In Elderly And Senile Men (2022) Journal of Pharmaceutical Negative Results P.1661-1664.
5. Zabolotskaya N.V. New technologies in ultrasound mammography / N.V. Zabolotskaya , V.S. Zabolotsky . – M.: STROM Firm LLC, 2018. – 256 p.
6. Kanaev S.V. [et al.] Possibilities of early detection of breast cancer neoplasms using ultrasound and radionuclide diagnostic methods // Issues of Oncology. - 2011. - T. 57. No. 5. - S. 622-626.

7. Levshin VF, Mikhailov EA Self-examination as a method of breast cancer screening [Journal]//Issues of oncology. - 2000 - pp. 627–629.
8. Putyrsky LA, Putyrsky Yu. L. Benign and malignant diseases of the mammary gland. Moscow: Medical Information Agency. 2008. Vol. 336.
9. Rybnikova E.I. Results of ultrasonic screening of mammary glands during medical examination of working women / E.I. Rybnikova, N.I. Novomlinskaya , E.A. Novikova // Bulletin of the State Technical University. - 2008. - V. 4, No. 3. - P.65-69.
10. Sencha A.N. Ultrasound examination of the mammary glands. Atlas / A.N. Sencha, Yu.V. Bikeev . Moscow: MEDpress-inform , 2021. - 296 p.
11. Sh, D. K., Razhabova, G. H., & Soliev, A. U. Features of the clinical course and treatment of chronic heart failure in the elderly. Asian Journal of Multi-Dimensional Research, 9(2-P), 112-119.
12. Tillashaikhov M.N., Dzhanklich S.M., Ibragimov Sh.N., Register for registering patients: use the experience of oncologists [article] // Journal of Organization and Management of Health Care, 2020
13. Shumanova T.A. et al., Application of the international classification BI - RADS in mammological practice. Guide for doctors. Ed. Elbi-Spb , 2018.
14. Semiglazov VF, Semiglazov VV Breast cancer screening // Practical Oncology. 2010. Vol. 11. No. 2. pp. 60-65.
15. International Agency for Research on Cancer; 2013