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HIGH TECHNOLOGIES IN EARLY DETECTION OF BREAST CANCER IN WOMEN OF DIFFERENT AGE GROUPS

Resume. In the world, about half a million cases of breast cancer are diagnosed annually. According to the Russian Society of Obstetricians and Gynecologists, the number of breast diseases is steadily increasing. Breast cancer is the most common type of cancer in Uzbekistan.

Despite the existence of many effective ways to recognize breast pathology, there is still a need for earlier detection based on the improvement of all technologies of the diagnostic process and the search for new criteria for raising the information content of ultrasound in the diagnosis of breast neoplasms.

Key words: breast cancer, tumor, ultrasound, sensor, fibrocystic mastopathy, galactoceles, atheroma, adenosis.

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ВЫСОКИЕ ТЕХНОЛОГИИ В РАННЕМ ВЫЯВЛЕНИИ ОНКОЛОГИЧЕСКИХ ЗАБОЛЕВАНИЙ МОЛОЧНЫХ ЖЕЛЕЗ У ЖЕНЩИН РАЗНЫХ ВОЗРАСТНЫХ ГРУПП

Резюме. В мире ежегодно диагностируется около полумиллиона случаев онкологических заболеваний молочной железы. По данным Российского общества акушеров-гинекологов, количество заболеваний молочных желез неуклонно растет. Рак молочной железы — самый распространённый вид опухолей в Узбекистане.

Несмотря на существование множества эффективных способов распознавания патологии молочной железы, остается необходимость более раннего ее выявления на основе совершенствования всех технологий диагностического процесса и поиска новых критериев для поднятия информативности ультразвукового исследования (УЗИ) в диагностике новообразований молочной железы.

Ключевые слова: молочной железы, опухоль, УЗИ, датчик, фиброзно-кистозная мастопатия, галактоцеле, атерома, аденоз.

Introduction: About half a million cases of breast cancer are diagnosed annually in the world. According to the Russian Society of Obstetricians and Gynecologists, the number of breast diseases is steadily increasing. Breast cancer is the most common type of cancer in Uzbekistan. According to the Ministry of Health of Uzbekistan, the most common type of cancer in the republic is breast cancer. This type of cancer is detected in 9.1 cases per 100 thousand of the population. The age of the affected women is continuously decreasing. Against this background, the issues of early diagnosis of breast cancer are becoming particularly relevant.

Despite the existence of many effective ways to recognize breast pathology, there is still a need for earlier detection based on the improvement of all technologies of the diagnostic process and the search for new criteria for raising the information content of ultrasound in the diagnosis of breast neoplasms [3-5]. This is due to the fact that this method has no contraindications, does not give radiation exposure and allows for targeted puncture biopsy when detecting breast tumors.

The aim of the study was to organize the early detection of breast tumors among women of different age groups in the Andijan region. Employees of the Department of Ultrasound Diagnostics of TASHIUV and the Department of Medical Radiology and Oncology of the FUV AGMI participated in the implementation of this study, [The study was conducted within the framework of the project "Improving women's health using high technologies" in cooperation with the organization GIZ (Germany)].

Materials and methods: a preventive ultrasound examination of the mammary glands was performed in 1116 women of various ages in the Andijan region. The study was conducted on an ultrasound device-SDR-2200 Philips MedizinSysteme. Ultrasound was performed by the standard method of holding gray-scale studies, complete with

high frequency transducer (7.5 MHz). Following a certain sequence of sensor movement allows you to avoid further loss of any parts of the mammary glands from the field of view [1, 2]. Scanning of different quadrants of the glands was performed sequentially, in different planes, at different angles of inclination of the sensor, the degree of compression of the gland and the intensity of ultrasound. When finding a nodal formation, its polypositional study was mandatory.

The results of the study and their discussion: women of different ages from the city and various districts of the region were involved in the preventive ultrasound examination. The women ranged in age from 19 to 58 years. Among the examined patients, women aged 25 to 35 years prevailed, but pathological changes were detected in the group of patients aged 35-45 years. Of the 1,116 examined, 595 residents of the city and 521 residents of the village, some areas were represented by isolated cases, which indicates a low level of health education and the lack of promotion of early detection of breast tumors by ultrasound.

The following formations were most often diagnosed in the mammary gland: fibrocystic mastopathy in 156 (29.4%); fibrotic mastopathy in 130 (24.5%); cysts in 85(16.5%); lymphadenopathy - 26 (4.9%); fibroadenoma - 13(2.4%); lipoma-12(2.2%); malignant tumors of the mammary gland in 11(2.1%), other forms of benign tumors were represented by isolated cases (galactoceles, atheroma, adenosis, etc.). The ultrasound picture of the fibrous form of mastopathy (in 130 women) was characterized by the presence of intertwining fibrous strands that passed into the surrounding healthy breast tissue, the breast parenchyma had a high echogenicity due to the alternation of hyperechoic connective tissue elements among less echogenic glandular structures. In fibrocystic mastopathy (156 cases), the characteristic echo signs were: the germination of fibrous tissue and the presence of small cysts with a homogeneous epithelium.

Echo signs of nodular mastopathy: the presence of different sizes, the appearance of single or multiple areas of reduced echogenicity without clear contours and borders.

The cysts had a pattern of anechoic homogeneous fluid formation of a rounded or ovoid shape, with a clear, even contour, no reflection from the internal contents, lateral acoustic shadows, and dorsal signal amplification.

Cysts had sizes from 10 to 30 mm-70, 30-60 mm-in 14; and only in one observation the cyst reached 80 mm.

Cysts, which were observed in 85 of the examined patients, and in 69 they were single and unilateral, and in 16 they were bilateral.

Fibroadenomas were detected on ultrasound in 13 patients, and in all of them, their size did not exceed 20 -25 mm in diameter, with smooth contours, mainly ovoid shape, reduced or isoechogenic echo density. It should be noted that in addition to the typical signs, 3 patients had fibroadenomas with indistinct, uneven contours. Lipomas had a smooth contour, isoechogenic or increased echo density. In 11 patients, ultrasound examination revealed the following echo signs: hypoechoic tumor formations of various sizes from 1.5 cm to 3 cm (the bowl resembled a solid formation), with uneven and indistinct edges and heterogeneous internal contents. (Fig. 1). 9 patients were diagnosed with a nodular form of breast cancer in the form of a single focus - 7 and 2 had several nodes.

In our study, the average size of malignant breast tumors was 1.7 ± 0.52 cm. Tumor nodes up to 1 cm in size were detected in 2, from 1 to 2 cm – in 4; from 2 to 3 cm - in 2; and above 3 cm –in 3 patients..

To verify the diagnosis, all patients underwent puncture biopsy of tumors under the control of ultrasound followed by histological examination, which allowed to establish the correct diagnosis in all 11 patients.

Conclusions: The advantages of breast ultrasound are safety in terms of dose load, which allows you to use it repeatedly without restrictions, resolution, which is

especially important in the dense background of the breast in young women. The use of ultrasound for screening studies of breast tumors in women of different age groups is justified and allows us to identify both benign and malignant breast tumors. It allows one hundred percent to diagnose cysts of any size, while without additional interventions it makes it possible to judge the state of the epithelium of the cyst lining; it makes it possible to perform targeted puncture biopsies of formations, under objective visual control.

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