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Women's health behaviours regarding early detection of breast cancer

Zachowania zdrowotne kobiet w zakresie wczesnego wykrywania raka piersi

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Abstract

Introduction and Objective. Breast cancer is the most common malignant tumour among women in highly developed countries, including Poland, and ranks first in terms of the incidence of malignant tumours in women. In the early stages of development, breast cancer may be completely asymptomatic, but in the advanced stage of the disease it causes numerous symptoms that impair functioning in every sphere of life. Integrated methods of oncological surgery, radiotherapy, chemotherapy and hormone therapy are used to treat breast cancer. Pro-health behaviours involving the elimination or modification of risk factors are promoted among women, as well as activities enabling early identification of disturbing symptoms related to cancer, such as breast self-examination or participation in a breast cancer prevention programme. Breast cancer diagnosed early has a high cure rate. The aim of this study is to review the literature on the impact of desired behaviours and activities in the field of breast cancer prevention.

Brief description of the state of knowledge. Women's knowledge about early diagnosis and risk factors of breast cancer is expanding. New drugs and therapy options have a positive impact on improving the prognosis, but the most important thing is to detect cancer at an early stage. Maintaining the so-called oncological vigilance expressed in knowledge of potential symptoms of breast cancer and the use of preventive and screening tests.

Summary. Breast cancer prevention should include educating women of all ages about the need for regular breast self-examination, medical examinations and, above all, participation in preventive programmes. Knowledge about early cancer detection methods, risk factors and prevention methods is vital in the fight against breast cancer in women.

Key words

breast cancer, primary prevention, prophylaxis, health-promoting behaviors

Streszczenie

Wprowadzenie i cel pracy. Rak piersi jest najczęstszym nowotworem złośliwym u kobiet w krajach wysokorozwiniętych, w tym w Polsce, i zajmuje pierwsze miejsce pod względem zachorowalności na nowotwory złośliwe u kobiet. Nowotwór piersi na wczesnych stadiach rozwoju może być całkowicie bezobjawowy, jednak w zaawansowanej fazie choroby daje liczne objawy zaburzające funkcjonowanie kobiety w każdej sferze życia. W leczeniu raka piersi stosowane są zintegrowane metody z zakresu chirurgii onkologicznej, radioterapii, chemioterapii i hormonoterapii.

Wśród kobiet promuje się zachowania prozdrowotne polegające na eliminacji lub modyfikacji czynników ryzyka, a także działania umożliwiające wczesną identyfikację niepokojących objawów związanych z nowotworem, takie jak samobadanie piersi lub udział w programie profilaktycznym raka piersi. Wcześnie rozpoznany nowotwór piersi charakteryzuje się wysoką wyleczalnością.

Celem niniejszej pracy jest przegląd literatury dotyczącej wpływu pożądanych zachowań i działań z zakresu profilaktyki raka piersi.

Opis stanu wiedzy. Kobiety mają coraz większą wiedzę na temat wczesnego rozpoznania oraz czynników ryzyka raka piersi. Nowe leki i opcje terapii pozytywnie wpływają na rokowania, jednak najważniejsze pozostaje wykrycie raka na wczesnym etapie zaawansowania choroby. Pomóc w tym może zachowanie tzw. czujności onkologicznej, wyrażającej się znajomością potencjalnych objawów raka piersi, oraz korzystanie z badań profilaktycznych i przesiewowych (skrining).

Podsumowanie. Profilaktyka raka piersi powinna obejmować edukację kobiet w każdym wieku na temat potrzeby regularnego samobadania piersi, korzystania z badań lekarskich, a przede wszystkim korzyści z udziału w programach profilaktycznych. Wiedza o metodach wczesnego wykrywania raka, czynnikach ryzyka i metodach zapobiegania tej chorobie jest kwestią kluczową w walce z nowotworami piersi u kobiet.

Słowa kluczowe

rak piersi, profilaktyka pierwotna, profilaktyka, zachowania prozdrowotne

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INTRODUCTION

Over the years, a constant increase in the number of breast cancer cases has been observed in Poland. According to data from the World Health Organization (WHO) from 2020, breast cancer accounted for 24.5% of diagnosed cancers and 15.5% of causes of cancer-related deaths in women [1]. In 2021, 21,079 cases were registered (crude incidence rate 107.40/100 thousand in Poland) and in 2011–17,010 cases (crude incidence rate 85.58/100 thousand in Poland). In 2021, breast cancer accounted for 24.15%, and in 2011–22.64 malignant tumors in women. In 2021, 6,406 women died in Poland due to breast cancer (crude mortality rate – 32.64/100,000 in Poland). In 2011, this number was 5,437 (crude mortality rate – 27.36/100 thousand in Poland) [2]. Observing the rate of increase in the number of breast cancer cases, it is estimated that in the 21st century this cancer will be the main health problem among women in Poland [3].

The most important risk factors for breast cancer include female gender and age over 50. The remaining factors include: the so-called reproductive factors, i.e. early menarche, late menopause, and the birth of the first child after the age of 30. Next in order are environmental factors: alcohol consumption, obesity, smoking, exposure to ionizing radiation, long-term hormone replacement therapy (especially estrogen-gestagen therapy) and some benign breast changes (atypical hyperplasia, non-infiltrative lobular hyperplasia) [4].

Approximately 5–10% of women with breast cancer have a family predisposition to the disease, the most important of which are mutations in the BRCA1 and BRCA2 suppressor genes. Women who are carriers of the above-mentioned mutations show an increased tendency to develop breast or ovarian cancer over the course of their lives. Additionally, these tumours have a worse prognosis than in BRCA-negative patients [5].

The Gail scale is used to assess the individual risk of developing breast cancer. It takes into account the age at which menarche occurred, the number of previously performed breast biopsies, the presence of atypical hyperplasia in the biopsy material, the age at which the first live birth occurred, the incidence of breast cancer in first-degree relatives, and age [6].

The basic method of diagnosing breast cancer is histopathological examination. The remaining methods: interview, physical examination, mammography, ultrasound, magnetic resonance imaging, cytological examination are complementary methods [7].

Symptoms of breast cancer. Clinical symptoms of breast cancer depend on the stage of advancement. In the initial stage, breast cancer may be asymptomatic. The first and most common symptom of the disease is a painless lump located in the upper outer quadrant of the breast (37% of cases) [8], usually found by women accidentally during breast self-examination.

Other symptoms include: nipple retraction, nipple discharge, skin lesions around the breast, ulceration, skin tightening, infiltrates, satellite nodules, and orange peel symptom. In the advanced phase, symptoms depend on the extent of local lesions and the location of metastatic foci. Stage IV cancer with distant metastases may lead to cancer cachexia [9].

Breast cancer treatment. Breast cancer treatment is based on the use of methods in the field of: oncological surgery, plastic surgery, oncological radiotherapy, clinical oncology, radiology, pathology, rehabilitation and psycho-oncology. The choice of treatment method depends on many prognostic factors, the most important of which include: the histological type of the tumour, the degree of malignancy and presence of distant metastases, as well as the expression of proteins specific for each tumour. In order to provide the best possible care to patients with breast cancer, specialized centres are established – Breast Cancer Units, which guarantee comprehensive diagnostics and an individual oncological treatment process [10].

The modern concept of combating cancer assumes taking preventive measures at every stage of the development of the cancer process. Primary prevention (prevention), secondary (early detection) and tertiary prevention (treatment) aim to reduce the number of cancer cases, reduce the number of deaths caused by cancer, and reduce the scale of disability caused by cancer, respectively [11].

The aim of activities referred to as primary prevention is to reduce the incidence of breast cancer, increase society›s awareness and knowledge of risk factors (or reduce exposure to these factors), the role of which in the development of cancer has been sufficiently confirmed.

The risk factors include, among others: alcohol – especially high-proof alcohol, a diet rich in saturated fats, obesity – especially in postmenopausal age, and especially abdominal type. Meanwhile, a diet rich in vegetables and fruits (high supply of folic acid) and regular physical activity significantly reduce the risk of breast cancer [12]. Modifying at least three of the factors mentioned above, i.e. dietary habits, physical inactivity and combating obesity, creates a potential chance of reducing the incidence of breast cancer [13].

Secondary prevention (early detection) involves activities aimed at early detection of cancer and, if possible, pre-cancerous conditions, which increases the chance of cure and sometimes allows the possibility of stopping the development of the disease.

Effective secondary prevention is screening of a specific group of people, e.g. in a specific age group, in a given city. The principle of screening tests is to perform a screening test in an asymptomatic population – in order to detect the disease being screened for as early as possible. Confirmation of a positive screening test result requires additional diagnostic tests [13].

Breast self-examination. The purpose of self-examination is to learn about: the structure of one›s own breasts, changes in the breasts and axillary lymph nodes, breast examination techniques, and 'warning signals' that can be seen and felt after gaining knowledge and practical skills in assessing organs [14].

Clinical breast examination. The most common symptom of breast cancer is a lump (or thickening of the breast tissue). In the past, a tumour (or thickening) was the first and only symptom of cancer in 60–80% of patients [15].

Many publications recommend that the basic principles of physical examination of the breasts are: using three middle fingers pressed together, performing the examination with the fingertips, using circular movements of the examining hand (with the diameter of a 20-cent coin), applying 3-degree pressure in each of the examined points, moving the hand along the pattern of vertical stripes, examining the breast and

chest wall, the armpit area (from the mid-axillary line) and the subclavian and supraclavicular areas – on both sides [16].

It is recommended that the following elements be included and described in the breast examination in accordance with the adopted scheme: breast symmetry, retraction of the skin, scars, skin colour, thickening or swelling of the skin, retraction of the nipples, presence of eczema around the nipples, presence of a lump or thickening of the breast – its location according to the clock face, size, location in relation to the skin and chest wall, mobility and consistency.

Similarly to nodules and thickenings, nodal changes in the axillary, subclavicular and supraclavicular areas should be assessed, as well as the presence of discharge from the nipples (type, colour, single-duct – multi-duct, unilateral – bilateral, spontaneous or under pressure), and the presence of inflammatory changes (redness). breasts, warming, swelling) [17].

Achieving the proper effectiveness of the examination requires careful performance of the complete breast assessment procedure, lasting at least 6–8 minutes [18].

Screening mammography. Mammography is the basic radiological examination of the breast.

Mammography, as the most important method of imaging breast cancer, is an X-ray examination that allows the detection of tumours with a diameter of several millimeters that are imperceptible to palpation. In patients with a palpable lesion, mammography makes it easier to determine its nature and allows it to be precisely located. The sensitivity of this test in patients with palpable breast cancer is estimated at 80–90% [19, 20]. The Code Against Cancer defines mammography as one of the most important preventive activities in oncology. The condition for its effectiveness is the mass scale of research [21, 22].

It is very important for every woman to examine her breasts herself. Self-examination of the breasts allows you to detect changes by palpation. This examination involves examining your breasts and checking if there is anything that has not happened before that might be worrying, whether the breast skin is not pulled, wrinkled, whether the epidermis is not peeling, and whether there is any discharge or bleeding from the nipple. Sensation of lumps or ulcers, or the occurrence of any of the symptoms described above requires a visit to a doctor [23].

SUMMARY

Breast cancer educational activities in the field of positive health behaviours should be intensified in order to reduce the risk of breast cancer among the whole of society, including medical staff. An information and educational campaign and the use of mass media should be used to promote health and contribute to intensifying activities aimed at convincing women of the benefits of preventive mammography examinations.

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