Breast Cancer

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Breast Cancer is a disease where cells in the breast tissue grow rapidly and out of control. It starts with a cell that is mutated by DNA, it proceeds to cause the mutated cells to grow at an abnormal rate and metastasize to breast tissue. A few classifications of breast cancer are inflammatory, metastatic, invasive ductal carcinoma, ductal carcinoma in situ, and Paget disease of the breast. There are four stages to this kind of cancer; starting in stage 1, where the cancer is small and obtained in one specific area. To stage 4, where it is not curable, but requires aggressive treatments. Signs and symptoms that can be experienced are irritation or itchy patches on the breasts, changes in breast size over a period, a lump appearing, and thickening of the skin around the armpit or breasts. An actress you may know from the hit show “Seinfeld” in the 1990’s is Julia Louis-Dreyfus. In 2017 she was diagnosed with stage 2 breast cancer. During that time, she had to have six rounds of chemotherapy and a double mastectomy. A double mastectomy is a surgery, where both breasts are removed. In addition, since she had stage 2 cancer, there was a presence of a small tumor, and her lymph nodes were affected.

Statement of the Problem

Women are more commonly affected by breast cancer than men. The rationale behind it is breast cells are continually exposed to estrogen and progesterone. In which both assist with cell growth; “in 2021, an estimated 43,600 breast cancer deaths will occur in females and 530 breast cancer deaths in males” (Mackey, 2021). The establishment of breast cancer is usually from one or more of these risk factors; “a personal history of invasive BC (either ductal carcinoma in situ (DCIS) or lobular carcinoma in situ (LCIS), or benign tumors or cysts), a

family history of first-degree relatives with BC, inherited changes in breast cancer gene 1 and 2 (BRCA1 and BRCA2), dense breast tissue, early menstruation, late onset menopause, use of hormonal treatment for menopausal symptoms, non-parity or having a first child later in life, overexposure to ionizing radiation (e.g., radiation therapy to the breast or chest area), excessive alcohol consumption, obesity, lack of exercise, ethnicity, and age" (De Silva and Alcorn, 2022). TNM is a staging system that examines the stage of the tumor and location; "the TNM staging system correlates important tumor characteristics with survival data to help estimate and follow outcomes. It is based upon a retrospective analysis of survival in diverse samples of patients representing all stages of disease" (Burstein, Chagpar, and Vora, 2022).

The different stages begin with stage 0, which is ductal carcinoma in situ. Stage 1 and Stage 2 it can either be a small tumor occurring in the breast tissue, a tumor that has spread to the axillary lymph nodes or spreading to both regions. In stage 3 the tumor has grown a bit more and is affecting more of the axillary lymph nodes and the internal mammary lymph nodes. Lastly is stage 4, the tumor can vary in sizes and metastasize to the lungs, bones, liver, and brain. Resulting in terminal cancer, which can lead to death.

The most common types of this cancer are invasive ductal carcinoma and invasive lobular carcinoma. If this disease is left untreated it can easily become fatal to the patient. If they decide to not take any medical action for their diagnosis, they will likely experience pain because of the tumor invading the skin. Oncology nurses specialize in the treatment of cancer, without the need to treat the disease there is no use for that department.

Treatment of The Problem

Prevention measures to take are to keep a stable healthy weight, be physically active; at least thirty minutes a day of walking, have a balance of vegetables, fruits, whole grains, fish, and chicken, avoid alcohol consumption, and smoking. Since women are commonly more at risk of breast cancer, there are recommendations for different age groups for screening. If you're younger than 40 years old, there will be no screening, besides a checkup every 1-3 years. Between the ages of 40-49 years old, it is advocated for an annual mammography with an ultrasound. A mammogram detects tumors inside the breasts that can't be felt or seen with a normal eye. Magnetic resonance imaging (MRI) is another test, commonly used when you're diagnosed with cancer. It measures the size and location of tumors in the breast. It is "more sensitive than mammography or ultrasonography in patients at high risk" (Mackey, 2021). It is important for effective "communication of the necessity of annual screening between provider and patient through informed decision making has been shown to greatly improve screening efforts and subsequently aid in earlier diagnosis" (Sullivan, Butler, and Evans, 2021).

Current treatments for early stage to advanced breast cancer would be surgery, a mastectomy or lumpectomy. After surgery, chemotherapy will be used following radiation to prevent recurrences. Chemotherapy destroys cells that are dividing quickly, either malignant or normal cells. Given in cycles with each treatment followed by a rest period that will give the body some time to recover from the effects. The effects being nausea, vomiting, fatigue, bone marrow suppression, and cognitive changes. In the preoperative state, "chemotherapy is used for patients with large primary tumors in relation to breast size who want breast-conserving surgery", and then "radiation therapy is used after surgical excision of breast cancer to eliminate any remaining subclinical disease" (Trayes and Cokenakes, 2021).

Planning of Teaching Content

Annual screening with a mammogram is essential for women over 40 years old, as it can detect any signs of abnormality. Catching sight of earlier stages of tumors results in higher survival rate and effective treatment. It is significant that you are aware of the warning signs of breast cancer for early prevention and treatment. These signs being “palpable abnormality, suspicious nipple discharge, other nipple changes such as inversion/retraction or rash, or unilateral breast swelling” (Lee, 2023). In effective teaching of breast cancer, I will utilize the statistics of women being affected by this disease. For example, “About 297,790 new cases of invasive breast cancer will be diagnosed in women”, and “the average risk of a woman in the United States developing breast cancer sometime in her life is about 13%. This means there is a 1 in 8 chance she will develop breast cancer” (American Cancer Society, 2023). Also, the specific risk factors of this disease. This will help educate the listeners if they have similar trends to the disease. During instruction, I will utilize a poster board with visuals and explanations of the pathophysiology of breast cancer. Also handing out pamphlets with more information that they can review.

Conclusion

Breast Cancer is caused by DNA mutations that activate cells in the breast tissue to grow rapidly and out of control. The factors that increase your chance of getting this disease are obesity, not being physically active, alcohol consumption, being a woman, ages over 30, genetics, hormone replacements, family history, and exposure to radiation. Some of these risk factors can be prevented. For example, maintaining a healthy weight, eating healthy foods, watching for any

changes to the breasts, go for a mammogram, exercising, limiting alcohol and smoking. Educating on the warning signs can help listeners seek out screening options, if they are experiencing swelling, redness of the breast, lumps, swollen lymph nodes under the arm, changes in size and shape, pain or tenderness, rashes, and itchy on or around the nipple. Providing information of the manifestations and causes of this disease will benefit anyone experiencing these problems. To promptly obtain screening/treatment to prevent advanced stages of cancer. This will result in higher survival rate and being able to avert the spread to other locations in the body.

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