



Breast Cancer And Mastitis A Brief Study Of Inflammatory Breast Cancer

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Type of Publication: Original Research Paper

Conflicts of Interest: Nil

Abstract

Background: some cells block lymph arteries in the breast's surface. This type of breast cancer makes the breast swollen, red or inflamed inflammatory breast cancer is uncommon, accounting for just 1 to 5% of all breast cancer diagnoses in the US. The majority of inflammatory breast cancers are invasive ductal carcinomas, meaning they started as cells lining the milk ducts of the breast and subsequently expanded beyond them.

Aim of study: The main strategy is to make people aware of the spread of breast cancer and various infections cause by it. Moreover, we here mainly focus about the rare and it is even rapidly developing case of breast cancer that is inflammatory breast cancer.

Materials and methods: A female of age 62 has been admitted in the emergency with the case of itchy, cellulites appearance of breast and she was obese in appearance and some suggestive measures seem to be inflammatory breast cancer.

Conclusions: since, inflammatory breast cancer is rare in condition so it isn't that easy to diagnose in the primary health centers

Keywords: breast cancer, inflammatory, mastitis, diagnosis

INTRODUCTION

Breast cancer is a cancer that starts in the breast tissue and spreads throughout the body. A change in breast form, dimpling of the skin, fluid flowing from the nipple, a newly inverted nipple, or a red or scaly patch of skin. Bone pain, enlarged lymph nodes, and shortness of breath, or yellow skin in people with distant spread of the illness. Taking a biopsy of the suspicious tissue confirms the diagnosis of breast cancer. Breast cancer most often originates in cells from the lining of milk ducts and the lobules that feed these ducts with milk. After a diagnosis is established, more tests are performed to assess if the cancer has spread beyond the breast and which therapies are most likely to be effective.

Mastitis

Infection of the breast tissue that occurs most commonly during the nursing period. Bacteria can enter a milk duct t Hormone therapy is a type of hormone replacement therapy. If the cancer cells contain hormone receptors, some medicines may be administered. These drugs prevent receptors from attaching to hormones by blocking them.

Radiation is a word that has a lot of different meanings Radiation treatments are frequently administered after chemotherapy and surgery to reduce the risk of cancer recurrence.

Immunotherapy. These medicines work by assisting your immune system in the battle against cancer. Through a break in the nipple, usually through the baby's mouth. Breast infections are most frequent one to three months following a baby's birth, but they can also happen to women who haven't recently given

birth or women who have reached menopause. Mastitis affects between 1% and 3% of nursing moms. Breast engorgement and inadequate breast emptying might exacerbate the issue and exacerbate the symptoms. Mastitis symptoms and signs might arise abruptly. Breast discomfort or warmth to the touch Breast swelling Thickening of breast tissue, or a breast lump Pain or a burning sensation constantly or when breast-feeding Skin redness, typically in a wedge-shaped pattern Fever of 101 F (38.3 C) or higher. Risk factors Previous mastitis while breast-feeding Sore or cracked nipples— although mastitis can develop without broken skin Wearing a tight-fitting bra or putting pressure on your breast when using a seat belt or carrying a heavy bag, which can restrict milk flow Improper nursing technique Becoming overly tired or stressed Poor nutrition.

Inflammatory breast cancer (IBC) is an uncommon and aggressive kind of breast cancer that typically manifests as a rash or irritated skin region. It constricts the lymphatic vessels in your breast skin. Inflammatory breast cancer is frequently misdiagnosed as an illness since it does not show up on mammography or ultrasound. It's generally developed into the skin of your breast by the time you're diagnosed. Despite the fact that it is frequently

a form of invasive ductal carcinoma, its symptoms, prognosis, and therapy differ from those of other types of breast cancer. IBC exhibits inflammatory signs such as swelling and redness, but it is not caused by infection or injury. Cancer cells block lymph arteries in the skin, causing the breast to seem "inflamed," which is one of the signs of IBC.

IBC does not appear to be a typical kind of breast cancer. It seldom causes a breast lump, and it may not be detected on a mammography. This makes diagnosis more difficult.

IBC is more common in younger women (younger than 40 years of age).

IBC seems to affect African-American women more frequently than white women.

Women who are overweight or obese are more likely to develop IBC.

IBC is also more aggressive than other kinds of breast cancer, growing and spreading considerably faster.

Because the breast cancer cells have grown into the skin, IBC is usually at a locally advanced stage when it is initially detected. (This indicates that it is at the very least stage III.)

Figure: 1 inflammatory breast cancer



Signs and symptoms

1. The skin of the breasts swells (edema).
2. Breast redness that covers more than a third of the breast
3. Pitting or thickening of the breast skin to give it the appearance and feel of an orange peel
4. A nipple that has been retracted or inverted.
5. Due to swelling, one breast seems to be bigger than the other.
6. Warmer and heavier in one breast than the other

7. Tender, uncomfortable, or itchy breasts are common.

Tenderness, redness, warmth, and itching are some signs of a breast infection or inflammation, such as mastitis if you're pregnant or nursing. Because these issues are far more frequent than IBC, your doctor may initially assume infection and prescribe antibiotics.

8. Breast discomfort

9. Changes in the breast area's skin. Pink or reddish patches with the texture and thickness of an orange are common.
10. An unsightly bruise on the breast that refuses to go away
11. Breast swells unexpectedly
12. A rash on the breast
13. Changes in the nipple or discharge
14. Lymph node swelling beneath the arm or in the neck

Diagnosis of inflammatory breast cancer

1. Mammogram. This might reveal whether the afflicted breast is denser or has thicker skin than the other.
2. MRI stands for Magnetic Resonance Imaging. It creates images of the breast and internal body structures using strong magnets and radio waves.
3. A CT scan is a type of imaging that uses X-ray. It's a high-powered X-ray that creates detailed images of your inside organs.
4. PET scan (positron emission tomography) is a kind of This test, when combined with a CT scan, can aid in the detection of cancer in lymph nodes and other parts of the body.
5. Ultrasound of the breasts. Sound waves are used to produce an image of the interior of your breast in this imaging examination. It may be able to detect alterations that aren't seen on mammograms.
6. A biopsy can determine whether or not you have cancer. To test it, a doctor will remove a tiny piece of breast tissue or skin.

Treatment of inflammatory breast cancer

1. Chemotherapy. This medication is used to reduce the tumor and make the malignancy operable before surgery. It also reduces the chances of the cancer returning.

2. Surgery. Chemotherapy may be followed by a mastectomy. This surgery eliminates your whole breast.
3. Targeted Therapy that is specific to the patient. If your cancer cells have too much of a protein called HER2, you may be prescribed HER2-targeted medicines.
4. Hormone therapy is a type of hormone replacement therapy. If the cancer cells contain hormone receptors, some medicines may be administered. These drugs prevent receptors from attaching to hormones by blocking them.
5. Radiation is a word that has a lot of different meanings. Radiation treatments are frequently administered after chemotherapy and surgery to reduce the risk of cancer recurrence.
6. Immunotherapy. These medicines work by assisting your immune system in the battle against cancer.

MATERIALS AND METHODS

Case report of inflammatory breast cancer

A 54-years old female obese woman arrived to our hospital's emergency room with a tiny lump in her breast that she had felt for a year; over the past two months, the breast had grown considerably larger, heavier, itchy, and hot, and had taken on a cellulites-like look. She also complained of discomfort in her right leg, which she had been treating with acupuncture and homoeopathic medicines for several months but had not gotten any better. G3P3, menarche at the age of 11, and menopause at the age of 46 were all part of her anamnesis. All three children were healthy and had been nursed for a year. Clinical examination Obesity, urine and faecal incontinence, and paralysis of both lower limbs are all symptoms of this disease. The left breast was enlarged by a huge and ill-defined mass with areolar erosion, which had extensive erythema and severe oedema with peau d'orange.

Figure: 2 left breast with peau d'orange



Pathological nodes in the axilla are also involved. C1, L2, and L3 lytic lesions with medullar compression, as well as numerous diffused lytic foci in the cranium, chest, arm, and leg bones, were discovered during a total body compute pathological nodes in the axilla are also involved. C1, L2, and L3 lytic lesions with medullar compression, as well as numerous diffused lytic foci in the cranium, chest, arm, and leg bones, were discovered during a total body computed tomography scan. There were no more secondary deposits found tomography scan. There were no more secondary deposits found. A tru-cut biopsy of the breast, a fine needle aspiration biopsy of the axillary nodes, and a biopsy of the breast skin were all performed right away, and all revealed ductal invasive carcinoma, GII, oestrogen and progesterone receptor-positive, and HER2/neu-positive, with dermal invasion and no lymphatic emboli. Tumour markers were as follows: CEA was 47.5 ng/ml; CA 15.3, 25.3 U/ml; CA 19.9, 58.4 U/ml; CA 125 was normal. All other indicators, such as renal and hepatic function, were within normal limits. After being submitted to the breast committee, the patient was put on analgesics, a biphosphonate regimen, and spinal column palliative radiation.

DISCUSSION

Inflammatory breast cancer is a difficult-to-diagnose illness with symptoms that are distinct from other kinds of breast cancer. Most women have lymph node metastases at the time of diagnosis, and around a third will have distant metastases. It is believed to account for 2% of breast cancer diagnoses in the United States, but 7% of breast cancer fatalities. The primary determinant of this tumour entity, according to pathologic studies, is carcinoma's cutaneous lymphatic infiltration. This case is a classic example of a contentious case since it is still unclear whether it is classed as primary or secondary inflammatory breast cancer [2, 3]. Aside from the clinical features (oedema, peau d'orange, and erythema that developed over a two-month period) and the lack of a concrete palpable mass, the histological examination revealed no dermal lymphatic invasion, and there is a history of a long-standing uncharacterized breast lump and areolar-nipple invasion. The discovery of oestrogen receptor positive was rather surprising whether we were dealing with a main inflammatory breast

carcinoma with secondary local invasion or with secondary inflammatory breast cancer owing to local invasion of a primary lump. Regardless of categorization, we are dealing with TNM stage IV metastatic illness in this patient.

CONCLUSION

Inflammatory breast cancer continues to be a difficult diagnostic and treatment issue. Its distinction into primary and secondary disease has to be established further, as the two types of disease require different therapy and prognosis.

Recent study on inflammatory breast cancer has looked at two genes, RhoC GTPase and WISP3, that are both changed in the majority of inflammatory breast tumors but not in non-inflammatory specimens there needs to be a clearer characterization of the clinical characteristics of inflammatory breast cancer.

REFERENCES

1. Merajver SD, Sabel MS. Inflammatory breast cancer. In: Harris JR, Lippman ME, Morrow M, Osborne CK, editors. *Diseases of the Breast*. 3rd ed. Philadelphia, PA: Lippincott Williams and Wilkins; 2004. pp. 971–982. [Google Scholar]
2. Lerebours F, Bieche I, Lidereau R. Update on inflammatory breast cancer. *Breast Cancer*
3. Res. 2005;7:52–58. [PMC free article] [PubMed] [Google Scholar]
4. Giordano SH, Hortobagyi GN. Inflammatory breast cancer: clinical progress and the main problems that must be addressed; review. *Breast Cancer Res*. 2003;5:284–288. [PMC free article] [PubMed] [Google Scholar]
5. Silva O, Zurrida S. *A Practical Guide*. 3rd ed. Edinburgh: Elsevier Saunders; 2005. *Breast Cancer*; p. 236. [Google Scholar]
6. Houchens NW, Merajver SD. Molecular determinants of the inflammatory breast cancer phenotype. *Oncology (Williston Park)* 2008;22:1556–1561. [PubMed] [Google Scholar]

7. Lee BJ, Tannenbaum NE. Inflammatory carcinoma of the breast: a report of twenty-eight cases from the breast clinic of Memorial Hospital. *Surg Gynecol Obstet.* 1924;39:580–595. [Google Scholar]
8. Taylor GW, Meltzer A. Inflammatory carcinoma of the breast. *Am J Cancer.* 1938;33:33–49. [Google Scholar] "Inflammatory Breast Cancer: Questions and Answers". National Cancer Institute. 2016-01-15. Retrieved 2006-12-02.
9. ^ "Facts for Life - Inflammatory Breast Cancer" (PDF). Susan G. Komen for the Cure. Retrieved 2006-12-02.
10. 9.^ [Jump up to:](#)^{a b} Wingo, Phyllis A; Jamison, Patricia M; Young, John L; Gargiullo, Paul (2004). "Population-Based Statistics for Women Diagnosed with Inflammatory Breast Cancer (United States)". *Cancer Causes & Control* (Submitted manuscript).
11. "Inflammatory Breast Cancer Help—Signs and Symptoms." Inflammatory Breast Cancer Association. 02 Apr. 2009 <<http://www.ibchelp.org/symptoms/>>
12. Kusama, M; Koyanagi, Y; Sekine, M; Serizawa, H; Ebihara, Y; Hirota, T; Nakamura, Y; Matsunaga, T (1994). "A case of inflammatory breast cancer successfully treated with 5'-DFUR and MPA". *Gan to Kagaku Ryoho. Cancer & Chemotherapy.* **21** (12): 2049–52. PMID 8085857.
13. Yamada, T; Okazaki, M; Okazaki, A; Sato, H; Watanabe, Y; Toda, K; Okazaki, Y; Asaishi, K; Hirata, K; Narimatsu, E (1992). "A case of inflammatory breast cancer treated with medroxyprogesterone acetate (MPA) in combination with intra-arterial infusion chemotherapy". *Gan to Kagaku Ryoho. Cancer & Chemotherapy.* **19** (11): 1923–5. PMID 1387777.
14. Van Laere, S. J (2006). "Nuclear Factor- κ B Signature of Inflammatory Breast Cancer by cDNA Microarray Validated by Quantitative Real-time Reverse Transcription-PCR, Immunohistochemistry, and Nuclear Factor- κ B DNA-Binding". *Clinical Cancer Research.* **12** (11): 3249–56. doi:10.1158/1078-0432.CCR-05-2800. PMID 16740744.
15. Van Laere, S J; Van Der Auwera, I; Van Den Eynden, G G; Van Dam, P; Van Marck, E A; Vermeulen, P B; Dirix, L Y (2007). "NF- κ B activation in inflammatory breast cancer is associated with oestrogen receptor downregulation, secondary to EGFR and/or ErbB2 overexpression and MAPK hyperactivation". *British Journal of Cancer.* **97** (5): 659–69. doi:10.1038/sj.bjc.6603906. PMC 2360371. PMID 17700572.