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A Study on the Incidence of Post Mastectomy Pain and Phantom Breast Syndrome Following Mastectomy

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Introduction

Breast cancer is cancer that develops from breast tissue.About 5–10% of cases are due to genes inherited from a person's parents, including BRCA1 and BRCA2 among others. Breast cancer most commonly develops in cells from the lining of milk ducts and the lobules that supply the ducts with milk. Cancers developing from the ducts are known as ductal carcinomas, while those developing from lobules are known as lobular carcinomas. Mastectomy is the surgical removal of breasts. It is important to note that term “Mastectomy” as used here , does not imply radical mastectomy or even removal of the entire breast, cases of pain after segmental mastectomy (lumpectomy) have also been reported(1,2)

Phantom breast : Phantom breast sensations described by women after breast surgery are similar to phantom related phenomena reported after amputation of limb. Women report sensation of the breast still being a present and intact part of their body despite having had a mastectomy.(3)

Phantom pain is related to deafferentation of neurons and their spontaneous and evoked hyperexcitability(4). It is also thought to be influenced by emotional factors and sympathetic nervous system(5).

Objectives

To find out the incidence of post mastectomy pain syndrome and phantom breast syndrome. In patients undergoing simple mastectomy or modified radical mastectomy for carcinoma breast in a tertiary care center.

Review of Literature

Invasive Breast Cancer

Invasive cancer are recognized by their lack of overall architecture , by the infiltration of cells haphazardly into a variable amount of stroma , or by the formation of sheets of continuous and monotonous cells without respect for form and function of a glandular organ.

Breast cancer is the second most common malignancy in India women and most common for women throughout the industrialized world, In India, Breast cancer accounts for 32% of all cancer in women .The American Cancer society estimates that during 2005 , 211,240 women will be diagnosed as having breast cancer.

The incidence rate of breast cancer has increased steadily over the past 40 years, by about 45 per year in the 1980s. Some experts believe that the earlier gradual increase in incidence can be explained by the more frequent and the systematic use of screening mammography and the lead time bias associated with earlier diagnosis. Another significant cause of the increasing incidence of breast cancer is that the average age of the population is increasing and more women are moving into the ages where breast cancer is more common.

The incidence of breast cancer has also increased worldwide. In 1985, it was estimated that more than 500,000 new cases would be diagnosed, with about half of the cases occurring in the western, industrialized countries and the other half occurring in developing countries. By 1990, it was estimated that close to 900,000 new cases of

breast cancer would be diagnosed, and during 2002, more than 1,100,000 women developed breast cancer. Incidence rates vary substantially around the world. These differences have been attributed to diet, whereas others might be related to behavioral modification associated to the changing roles of women in modern industrialized societies(earlier onset of menses, delayed parity, use of oral contraceptives and hormone replacement therapy, later onset of menopause, longer life expectancy and increased consumption of alcohol.

Materials and Methods

Place: Department of General Surgery, Government stanley hospital,Chennai 01

Design: Cohort study

Period: June 2013 to August 2015

Sample size: 100 patients

N=4pq/d2

P=55%(proportion of patients suffering pain following surgery)

Q=100-p=45%

D=10% (absolute precision)

Final sample size=100

Study population: patients with benign breast disease and malignant undergoing mastectomy surgery in Stanley medical hospital.

Inclusion criteria

- Patients above 18 years
- Patients who underwent simple mastectomy
- Patients who underwent modified radical mastectomy
- Patients who were given neo adjuvant or adjuvant chemotherapy
- Patients who were given radiotherapy
- Patients who are consenting to participate in the study

Exclusion criteria:

- Patients who were below 18 years.
- Patients with bilateral breast disease
- Patients who underwent lumpectomy or quadrantectomy or breast

Reconstruction

- Patients who underwent previous surgery in axilla
- Pain associated with upper extremity lymphedema
- Patients with local recurrence

Methods of data collection

Patients were followed for a period of 3 cycles of chemotherapy after surgery. During follow up patients were enquired using a protected questionnaire about symptoms related to pain and swelling after operation, followed by thorough physical examination which includes examination of breast and axilla for any tenderness,mass(residual/recurrent).

Statistical Analysis

Table 1-Frequency of Patients Who Went Mrm And Simple Mastectomy.

TYPE OF SURGERY	TOTAL	%PERCENTAGE
MRM	81	81%
SIMPLE MASTECTOMY	19	19%

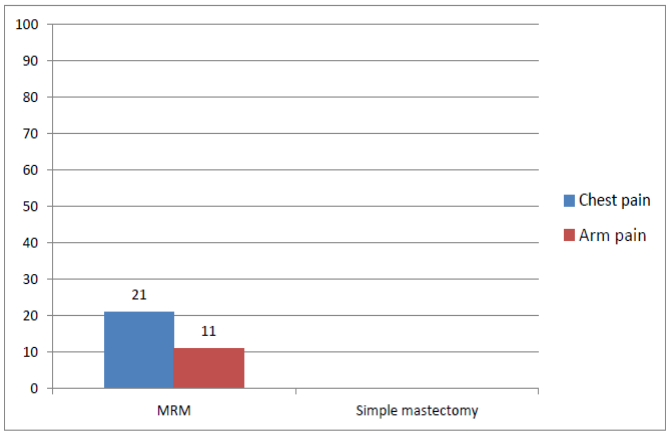
Out of 100 patients included in the study 81 underwent modified radical mastectomy with axillary lymph node dissection and 19 of them underwent simple mastectomy for locally advanced carcinoma breast as a palliative measure.

Results

Incidence of Chest Pain and Arm Pain Following Surgery

Out of 81 patients who underwent modified radical mastectomy 21/81 patients (26%) experienced post mastectomy pain over the chest wall with 11/81(13.5%) of them having pain in arm only. The incidence of pain following simple mastectomy was none.

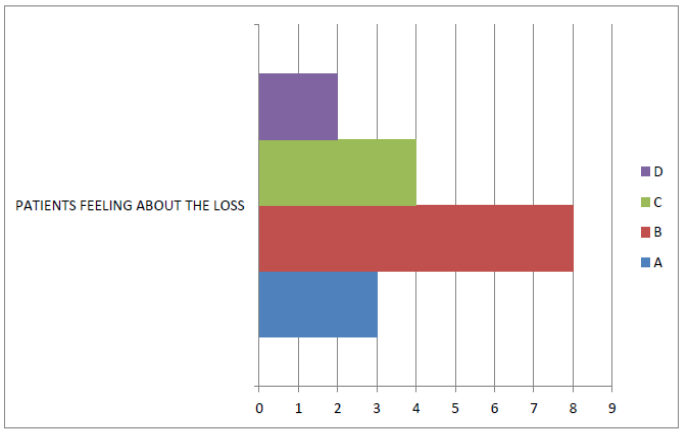
Figure 1: Bar Graph Representing Frequency Distribution of Pain.



Patients who felt themselves disabled following mastectomy were picked through questionnaire and was found to be 17%.

Impact of Mastectomy Among Patients

Figure 2- Impact Of Mastectomy Among Patients.

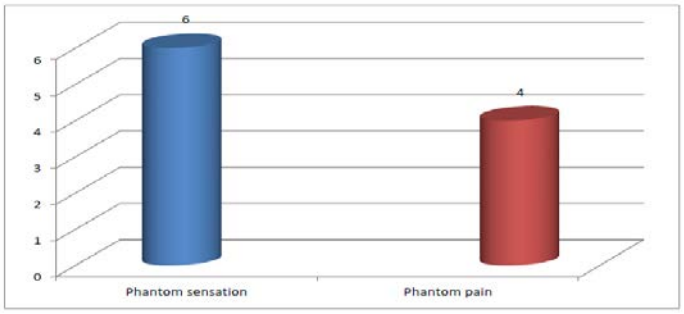


All the patients when asked about how they felt about the loss of their breast

A.3% were sad and crying about their loss B.8% were not able to move freely as before C.4% were sad about their sexual life D.2% felt like having prosthesis E.Remaining do not have any of them

Incidence of Phantom Breast Pain

Among 81 patients who underwent MRM 5% i.e. 4 patients were found to have phantom pain and 7% i.e. 6 patients experienced phantom sensation in the region of the operated breast.



Discussion

In our study totally 17 patients experienced phantom breast syndrome which in our population presented as disabled feeling, phantom pain and sensation, of these 83% of them were in the age group of 20-40 years with 3 of them presenting were beyond 40 years, hence in our population the occurrence of phantom breast syndrome was mainly in age group of below 40 years and patients in their period of reproductive age group.

Conclusion

1. Out of 100 patients,81 underwent Modified Radical Mastectomy and the remaining underwent simple mastectomy

2. Mean age of patients-47. Out of patients who underwent modified radical mastectomy,26% of patients experienced post mastectomy pain over the chestwall and 13.5% of them having pain in the arm. In simple mastectomy there was no pain in the chestwall and arm.

3. 17% of patients felt themselves disabled following mastectomy.

4. 5% patients experienced phantom pain .7% experienced phantom sensation in the region of the operated site after modified radical mastectomy

5. The occurrence of phantom breast syndrome in our patients was found to be 27%.

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