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Incidence of Phantom Breast Syndrome in Post Operative Female Breast Cancer Patients

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Abstract: ***Introduction: Breast cancer (BC) is a common type of cancer among female human populations [1]. Approximately, one million new cases are diagnosed per year, and it is expected to increase in the future [2]. It is estimated that over 50% of women suffer from chronic pain after breast cancer surgery. The prevalent surgical mode of therapy of breast invasive carcinoma are breast-protective surgery and modified radical mastectomy. "Phantom Breast Syndrome" (PBS) is a condition wherein patients have a sensation of residual breast tissue. The condition can include phantom breast pain and non-painful sensations as well. The incidence varies across different studies, ranging from approximately 30% to as high as 80% of patients after mastectomy. [3] PBS can persist years after surgery. [4] Materials & Methods: 45 patients who underwent mastectomy were enrolled for the study and using data retrieved from questionnaires, the presence of phantom breast syndrome was assessed & calculated using a scoring system which included various risk factors. Results: In the study conducted in our hospital the incidence of phantom breast syndrome was noted to be 77.8 %.40% of the study population had mild preoperative pain and 37.8 % had moderate preoperative pain. Incidence of post operative pain from one month to one year after surgery was found to be 73.3 %. The incidence of PBS was found to be highest in patients who presented with locally advanced breast cancer at 46.7%, those with early breast cancer with nodal metastasis, early breast cancer without nodal metastasis and patient who underwent post neo-adjuvant/adjuvant chemotherapy had incidence of 17.8%, 6.7% and 28.9% respectively. Among those having PBS, incidence of mild, moderate, and severe depression was 66.7%, 20% and 11.1% respectively with predilection towards younger age. The highest incidence of PBS was noted in the age group of 49-58 years probably due to the following reasons: 1) lack of preoperative and postoperative psychiatric counseling. 2) minimal employment of reconstructive procedures. 3) lack of awareness among patients. Conclusion: There is a high incidence of Phantom Breast Syndrome among patients with breast cancer post-surgery. Emphasis is laid on more usage of breast conservative procedures and adequate pain management apart from psychological follow-up.***

Keywords: Phantom breast syndrome, Breast cancer, Mastectomy

1. Introduction

Breast cancer has captured the attention of surgeons throughout the ages. The **Smith Surgical Papyrus** (3000-2500 BC) is the earliest known document to refer to breast cancer, though in a man, with a description encompassing most of the common clinical features. In reference to this cancer, the author concluded, "There is no treatment". [5] There were few other historical references to breast cancer until the first century, in **De Medicina**, **Celsus** commented on the value of operations for early breast cancer: "None of these may be removed but the cacoethes (early cancer), the rest are irritated by every method of cure. The more violent the operations are, the more angry they grow. " [6] In the second century, Galen inscribed his classical clinical observation: "We have often seen in the breast a tumor exactly resembling the animal the crab. Just as the crab has legs on both sides of his body, so in this disease the veins extending out from the unnatural growth take the shape of a crab's legs. We have often cured this disease in its early stages, but after it has reached a large size, no one has cured it. In all operations we attempt to excise the tumor in a circle where it borders on the healthy tissue. "

Breast cancer is the most common site-specific cancer in women and is the leading cause of death from cancer for women aged 20 to 59 years. It accounts for 29% of all newly diagnosed cancers in females and is responsible for 14% of the cancer-related deaths in women. In recent years, the common standard surgical procedures for the treatment of breast invasive carcinoma are breast-protective surgery and modified radical mastectomy. With the improvement of survival rate, the procedure has been focused on quality of BC survivors. Currently, 5-year survival occurs in over 80 percent of cases that entail rapid diagnosis and improved management. [7] It is estimated that over 50% of women suffer chronic pain following treatment for breast cancer surgery. **"Phantom Breast Syndrome"** (PBS) is a condition in which patients have a sensation of residual breast tissue which can include both non-painful sensations as well as phantom breast pain.

2. Aims and Objectives

- To assess the incidence of Phantom breast syndrome in Post-operative Breast cancer patients
- Detection of various factors risk factors influencing the development of Phantom Breast Syndrome in Post-operative Breast cancer patients

Phantom breast syndrome

Phantom breast syndrome [25] is a type of condition in which patients have a sensation of residual breast tissue and can include both non-painful sensations as well as phantom breast pain. The incidence varies in different studies, ranging from approximately 30% to as high as 80% of patients after mastectomy. It seriously affects quality of life through the

combined impact of physical disability and emotional distress. The breast cancer incidence rate in India as well as Western countries has risen in recent years while survival rates have improved; this has effectively increased the number of women for whom post-treatment quality of life is important. In this context, chronic pain following treatment for breast cancer surgery is a significantly under-recognized and under-treated problem. The syndrome can start even after more than one year of surgery. The incidence varies across different studies, ranging from approximately 30% to as high as 80% of patients after mastectomy. PBS can persist years after surgery.

The PBS, including the spectrum of syndromes, results from varying non-painful breast sensations to extremely painful distressing conditions. It may be localized in the nipple and then expand to the whole breast. Patients may sense pain or discomfort, itching, tingling, pressure or burning, throbbing, stabbing, and even the sensation of tingling, lancinating, electrical shock, and premenstrual-type discomfort in the removed breast (8-11). PBS was firstly considered by Mitchell, but it is not still completely understood (I). Phantom pain characteristics have been classified into the four following groups: 1) Severity of pain, 2) Attack frequency, 3) Duration of attack, and 4) Pain description (12). PBS begins over three months after surgery and usually occurs in the first year after mastectomy; the highest prevalence rate was seen over one month after the operation. The pain may be sensed in all parts of the breast or merely in the nipple (13). It usually occurs as intermittently as every 2-4 weeks (9, 10, 11).

In the survey of Hansen, there was an association between PBS and age, breast zone pain, chemotherapy, radiotherapy, and aggregated link and node protection (ALNP). Chemotherapy and radiotherapy were not common risk factors for phantom pain, such as neuropathic pain syndromes after mastectomy, including acute postoperative pain and the further use of analgesic activity (14). Therefore, the relief of acute severe pain may decrease the risk of chronic pain (15). Preoperative pain of the breast has a correlation with increased pain and phantom sensation (16).

Jung et al., [17] distinguished four different types of chronic neuropathic pain due to surgical trauma following breast cancer surgery: (1) Phantom Breast Pain is pain experienced in the area of a removed breast, (2) Intercostobrachial Neuralgia is pain often accompanied with sensory changes, in the distribution of the intercostobrachial nerve following breast cancer surgery with or without axillary dissection. The intercostobrachial nerves run from the chest wall through the axilla to innervate the shoulder and upper arm. With axillary node dissection, these nerves are impossible to spare. Unfortunately, the risk of damage to the intercostobrachial nerve in breast-conserving surgery can be at times equivalent to that which occurs with complete mastectomy. Granek et al., [18] revealed a wide variation in the size, location and branching of the intercostobrachial nerve which may explain the high risk of damage to these nerves irrespective of the surgical approach. Sensory symptoms have been shown to vary depending on the origin at which the nerve is sectioned. Post-mastectomy pain syndrome (PMPS) consists of pain and sensory changes localized to the axilla, medial upper arm, and/or the anterior chest wall on the ipsilateral side of the surgery. Pain starts immediately or soon after breast surgery. Damage to the intercostobracial nerve has been identified as the most common cause of PMPS. [19, 20] Incidence varies from 20-50%. [17] Neuroma pain (including scar pain) is pain in the region of a scar on the breast, chest, or arm that is provoked or exacerbated by percussion. Excision to enable relocation of the neuroma to a protected site may be beneficial, but may risk an increase in neuropathic pain. [21] Other nerve injury pain may result from damage or traction to the medial and lateral pectoral, long thoracic, or thoracodorsal nerves. In Jung et al. 's review, there were 21 studies with follow-up periods from 1-96 months (one study of 210 months), which revealed the following widely varying ranges of prevalence estimates: Phantom breast pain 3-44%, intercostobrachial neuralgia (ICN) 16-39% for all breast cancer surgery, ICN in breast-conserving surgery 14-61% and neuroma pain 23-49%. [27] Trial sizes to date have ranged from 22 to 283 patients, leaving considerable uncertainty about the overall size of the problem. However, even estimates at the lower end of these ranges suggest that the problem is considerable. Variations in the reported size of the problem are also due to other factors including duration of time since surgery, type of surgery, research method, diagnostic criteria, pain assessment methods, and the distribution of various demographic and clinical characteristics in the samples studied. In addition, very few studies differentiate pain syndromes according to the type of surgical procedure used. Wallace et al., [20] analyzed the incidence, intensity and character of pain after four types of breast surgery: Mastectomy for breast cancer; mastectomy with reconstruction for breast cancer; cosmetic augmentation; and breast reduction. The highest incidence occurred in the combined mastectomy and reconstruction with breast implants at 53%. There was equal incidence of about 30% in those undergoing reconstruction without implants and mastectomy without reconstruction. Breast augmentation with subglandular implants and breast reduction were the lowest at 21%. In a recent study, Dijkstra et al., [22] found the prevalence of phantom breast sensations or pain to be lower than in most previous studies. They attributed these differences to research methodology

Pathophysiology

There are a number of assumed factors causing or perpetuating persistent neuropathic pain after breast cancer surgery. There is, however, a lack of large-scale multiple risk factor studies identifying the variables as independent risk factors or evaluating their relationships with other variables, which are known to affect the development of chronic pain. From the literature currently available, the most well-established risk factors for developing phantom breast pain and other related neuropathic pain syndromes are severe acute postoperative pain and greater postoperative use of analgesics. [18] These are consistent with all persistent post-surgical neuropathic pain syndromes. Hence, it is assumed that the relief of severe acute pain may reduce the risk of chronic pain. Preoperative breast pain correlated with increased phantom breast sensation and phantom breast pain. [19]

Underlying each of the four classifications of pain after breast cancer surgery is damage to various nerves during surgery. Nerve preservation approaches have shown reduced incidence of sensory deficits (53% vs 84% of women) but nerve-sparing is only successful in 65% of the cases where it was attempted. [13] Evidence to support age as a risk factor is currently inconclusive. Younger patients (under 35 years of age), however, have poorer prognosis due to more aggressive cancers or higher rates of recurrence. Chemotherapy and radiation therapy are reported not to be direct risk factors of phantom breast pain but may cause additional pain through peripheral neuropathy, plexopathy, and plexitis. Psychosocial distress has been found to be both a consequence of chronic pain and a risk factor for its development. [17] While younger age and being unmarried were also independently associated with persisting acute pain, these were postulated to reflect the psychosocial effects of reduced social support.

Phantom breast pain and other pain syndromes severely affect the quality of life of patients. The negative impact on a patient's physical and psychosocial functioning is consistent with many chronic and cancer pain syndromes. It has been reported that up to half of patients report negative impact of pain on their activities and up to one-quarter report moderate to high impact on their daily activities at home and work. Not surprisingly, studies have also found that breast cancer surgery patients with chronic pain have a greater psychological stress and psychiatric morbidity than the general population. [17, 21]

A broad-based approach targeting the mechanisms involved in persistent neuropathic pain after breast cancer surgery is also required. Minimizing damage to nerves during surgery: Improved screening methods detect breast cancer at earlier stages. Earlier detection means smaller tumor sizes, which has made breast-conserving surgical treatments possible and widely used over the traditional method, modified radical mastectomy. These currently account for up to 40% of breast cancer surgery. [15] Breast-conserving techniques include lumpectomy, conservative breast surgery, wide local excision, partial mastectomy, segmentectomy, or tylectomy. Such approaches include reducing the number of axillary dissections required. Combining reduced surgical trauma with nerve preservation techniques may reduce the risk of sensory deficits and the occurrence of ICN. [16, 23] In this regard, the increased use of less invasive staging techniques such as sentinel lymph node biopsy has helped to reduce the number of patients undergoing axillary dissection and the resulting trauma to intercostobrachial nerves. [24]

3. Materials and Methods

Study Design: Prospective Cohort study (from time of diagnosis to post-surgical period within 7 days).

Study Centre: Department of General Surgery, Department of Medical Oncology and Department of Surgical Oncology.

Study Period: August 2020-September 2021.

Study Population: All post operative Breast cancer patients between the ages of 18-59 attending the Department of Surgery and Department of Medical Oncology and Department of Surgical Oncology in our institution.

Sample Population:

$n = 4pq/d^2$
n-sample size
p-incidence of Phantom Breast Syndrome in Post-operative Breast cancer patients
q=100-p
d= allowable error

Based on a confidence level of 95%, percentage of incidence of Phantom breast syndrome in female post Op breast cancer patients being 90 % (18). Female breast cancers patients – assessment of phantom breast syndrome at post-surgical period-45 cases.

Inclusion Criteria:

- Female patients with post operative Breast cancers aged between 18 to 59.

Exclusion Criteria:

- Known cases of Depression (mentally stable patients)
- Organic brain lesions, Antiepileptics, Antidepressants, Antipsychotics
- Suicidal attempts
- patients with chronic use of NSAIDS
- Female patients with Breast cancers post MRM aged 60 years and above
- B/L Breast cancer patients
- Signs of active infection

Materials and Methodology

"Phantom Breast Syndrome (PBS) is a type of condition in which patients have a sensation of residual breast tissue and can include both non-painful sensations as well as phantom breast pain. Patient may have pain and discomfort, itching, pins and needles sensations, tingling, pressure, burning, and throbbing.

All details on patients including personal data, demographic data, menarche, menopause, breast feeding history, family history, obstetric history, side and stage of cancer, HPE, surgery done, date of surgery. Patient is then examine to rule out any active cause of pain like infection, post op collection, recurrence. Then the patient is made to fill out the questionnaire devised on SCORING FOR ASSESSEMENT OF MASTECTOMY PAIN SYNDROME IN POST OPERATIVE CA BREAST PATIENTS.

The scoring system devised with total of 8 Questions with 7 questions having response ranging from 0-3 with total score of 21, With score **10 above** considered to be patient having phantom breast syndrome or ticking more **5 and more colored box** considered to be positive for having phantom breast syndrome. In this scoring system, post op pain is assessed using **VAS scale**. Depression is assessed using

PHQ-9 questionnaire. The patient is followed up for a period of 1 year in op basis in 3 monthly basis

Data Collection Procedures:
Data collection was done in the study area after obtaining prior permission from the Professor & HOD, Department of General Surgery and The Dean, Govt. Kilpauk Medical College and approval of Institutional Ethical Committee. Each participant was given a brief introduction about the study and informed consent was obtained from all participants. The information about the study was explained to the patient in the local language clearly till they understood. Data collection will be done using standardized proforma

Statistical Analysis:
The data collected from the questionnaires will be entered in Microsoft Excel 2013 version and the master chart will be framed. The data entered will be double checked for any errors. The data from the master chart will be exported to Statistical Package for Software Solutions (SPSS) version 21 for analysis.

Continuous variables (Age, Stage of cancer, Time of appearance of pain) will be presented in the form of descriptive statistics (mean and standard deviation). Association between continuous variables and a grouping variable will be tested using unpaired 't' test.

Categorical variables (Type of surgery underwent, Pre-operative pain, Family support, Depression) will be presented in the form of frequency distributions and percentages. Association between categorical variables will be tested using Chi square tests.

Results will be expressed in proportion with 95% confidence interval. The level of significance is considered as $P < 0.05$.

Confidentiality:
Confidentiality of the patients will be maintained and the study will be carried out after the approval of the Ethical Committee.

4. Observation & Result

Table 1: Phantom Breast Syndrome in CA Breast Patients in the given study population 77.8 % have been found to have PBS

	Frequency	Percent	Valid Percent	Cumulative Percent
Positive	**35**	**77.8**	**77.8**	**77.8**
Negative	10	22.2	22.2	100
Total	45	100	100	

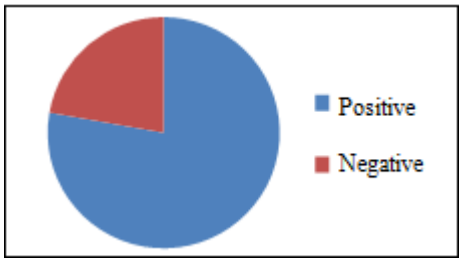

Table 2: Provisional Diagnosis-side

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Right carcinoma breast	27	60	60	60
	Left carcinoma breast	18	40	40	100

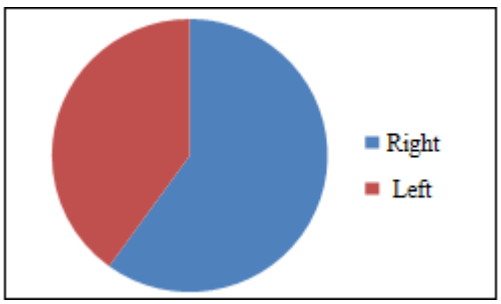

Table 3: Pre Op pain (vas scale) 40% of the given population have had mild pre operative pain

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Mild**	**18**	**40**	**40**	**40**
	Moderate	17	37.8	37.8	77.8
	Nil	10	22.2	22.2	100
	Total	45	100	100	

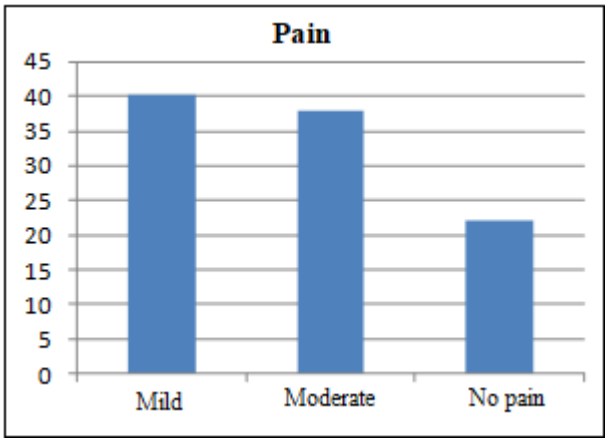

Table 4: Time of Pain appearance after Post OP Post Operative Pain 73.3 % found to have in 1 month – 1year period

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1month-1 year	33	73.3	73.3	73.3
	Nil	12	26.7	26.7	100
	Total	45	100	100	

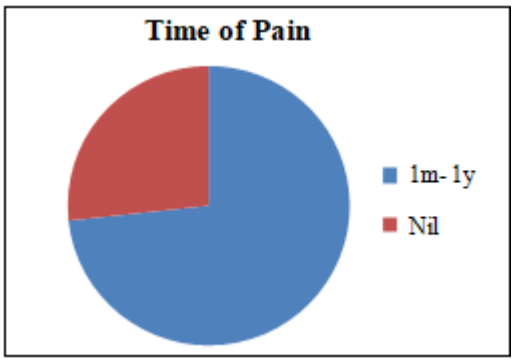

Table 5: Stage of CA when operated Patient who have Presented with LABC have Highest Incidence of PBS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Early Node	8	17.8	17.8	17.8
	LABC	21	46.7	46.7	64.4
	Post neo adjuvant	13	28.9	28.9	93.3
	Early No Node	3	6.7	6.7	100
	Total	45	100	100	

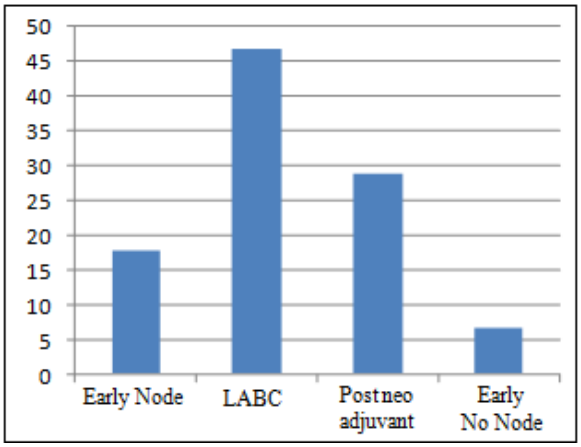

Table 6: Depression around 66.7 % of Population found to have Mild Depression

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Mild	30	66.7	66.7	66.7
	Moderate	9	20	20	86.7
	Severe	5	11.1	11.1	97.8
	Nil	1	2.2	2.2	100
	Total	45	100	100	

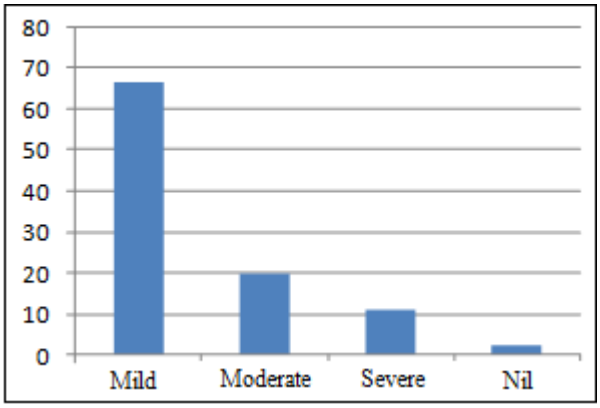

Table 7: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Patient Age	45	29	65	47.27	8.54
Total Score out of 21	45	6	16	11.82	2.724
Valid N (listwise)	45				

Table 8: Provisional Diagnosis * Phantom Breast Syndrome in CA Breast Patients Crosstab

			Phantom Breast Syndrome in CA Breast Patients		Total
			Positive	Negative	
Provisional Diagnosis	Right carcinoma breast	Count	21	6	27
		% within Provisional Diagnosis	77%	23.10%	100.00%
	Left carcinoma breast	Count	14	4	18
		% within Provisional Diagnosis	77.80%	22.20%	100.00%
Total		Count	35	10	45
		% within Provisional Diagnosis	77.80%	22.20%	100.00%
Chi-Square Tests					
		Value	Df	Asymp. Sig. (2-sided)	
Pearson Chi-Square		.297[a]	2	0.862	
Likelihood Ratio		0.514	2	0.774	
Linear-by-Linear Association		0.085	1	0.77	
N of Valid Cases		45			

a.3 cells (50.0%) have expected count less than 5. The minimum expected count is.22.

Hence side of breast has no significance in PBS

Table 9: Pre OP pain (VAS scale) * Phantom Breast Syndrome in CA Breast Patients Crosstab

			Phantom Breast Syndrome in CA Breast Patients		Total
			Positive	Negative	
Pre Op pain (vas scale)	Mild	Count	18	0	18
		% within Pre Op pain (vas scale)	100.00%	0.00%	100.00%
	Moderate	Count	17	0	17
		% within Pre Op pain (vas scale)	100.00%	0.00%	100.00%
	Nil	Count	0	10	10
		% within Pre Op pain (vas scale)	0.00%	100.00%	100.00%
Total		Count	35	10	45
		% within Pre Op pain (vas scale)	77.80%	22.20%	100.00%

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	45.000[a]	2	0
Likelihood Ratio	47.674	2	0
Linear-by-Linear Association	29.526	1	0
N of Valid Cases	45		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is 2.22.

Table 10: Pre Operative Pain is proven to be Significant Risk Factor for PBS

Crosstab

			Phantom Breast Syndrome in CA Breast Patients		Total
			Positive	Negative	
Time of Pain appearance after Post Op	1month-1 year	Count	33	0	33
		% within Time of Pain appearance after Post Op	100.00%	0.00%	100.00%
	Nil	Count	2	10	12
		% within Time of Pain appearance after Post Op	16.70%	83.30%	100.00%
Total		Count	35	10	45
		% within Time of Pain appearance after Post Op	77.80%	22.20%	100.00%

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	35.357[a]	1	0		
Continuity Correction[b]	30.7	1	0		
Likelihood Ratio	36.86	1	0		
Fisher's Exact Test				0	0
Linear-by-Linear Association	34.571	1	0		
N of Valid Cases	45				

a.1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.67.
b. Computed only for a 2x2 table

In Phantom Breast Syndrome in CA Breast
Patient Time of Appearance of Post Operative Pain is Proven to be significant Risk Factor for PBS

Table 11: Stage of CA when operated * PHANTOM BREAST SYNDROME IN CA BREAST PATIENTS

			Phantom Breast Syndrome in CA Breast Patients		Total
			Positive	Negative	
Stage of CA when operated	Early Node	Count	3	5	8
		% within Stage of CA when operated	37.50%	62.50%	100.00%
	LABC	Count	18	3	21
		% within Stage of CA when operated	85.70%	14.30%	100.00%
	Post neo adjuvant	Count	13	0	13
		% within Stage of CA when operated	100.00%	0.00%	100.00%
	Early No Node	Count	1	2	3
		% within Stage of CA when operated	33.30%	66.70%	100.00%
Total		Count	35	10	45
		% within Stage of CA when operated	77.80%	22.20%	100.00%

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.417[a]	3	0.001
Likelihood Ratio	16.045	3	0.001
Linear-by-Linear Association	2.214	1	0.137
N of Valid Cases	45		

a. 5 cells (62.5%) have expected count less than 5. The minimum expected count is.67.

Table 12: Depression * Phantom Breast Syndrome in CA Breast Patients

Crosstab

Incidence Highest in LABC-hence stage of carcinoma is a significant risk factor

			Phantom Breast Syndrome In CA Breast Patients		Total
			Positive	Negative	
Depression	Mild	Count	24	6	30
		% within Depression	80.00%	20.00%	100.00%
	Moderate	Count	5	4	9
		% within Depression	55.60%	44.40%	100.00%
	Severe	Count	5	0	5
		% within Depression	100.00%	0.00%	100.00%
	Nil	Count	1	0	1
		% within Depression	100.00%	0.00%	100.00%
Total		Count	35	10	45
		% within Depression	77.80%	22.20%	100.00%

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.371[a]	3	0.224
Likelihood Ratio	5.284	3	0.152
Linear-by-Linear Association	0.164	1	0.685
N of Valid Cases	45		

a. 5 cells (62.5%) have expected count less than 5. The minimum expected count is.22.

Depression is Proven to Be Siginificant Risk Factor for PBS

5. Discussion

Phantom Breast Syndrome Is A Type Of Condition In Which Patients Have A Sensation Of Residual Breast Tissue And Can Include Both Non-Painful Sensations As Well As Phantom Breast Pain. The Incidence Varies In Different Studies, Ranging From Approximately 30% To As High As 80% Of Patients After Mastectomy. Young Age, Pre Operative Pain, Stage Of Ca On MRM, Chemo Radiation, Type Of Surgery, Reconstructive Procedure Are Potential Risk Factor For PBS. It Has Been Reported That Up To Half Of Patients Report Negative Impact Of Pain On Their Activities And Up To One Quarter Report Moderate To High Impact On Their Daily Activities At Home And Work. Not Surprisingly, Studies Have Also Found That Breast Cancer Surgery Patients With Chronic Pain Have A Greater Psychological Stress And Psychiatric Morbidity Than The General Population. Hence This Has To Be Diagnosed Early And Treated Accordingly As It Affects The Quality Of Life And Morbidity Of Ca Patients. In the study conducted in our hospital the incidence of phantom breast syndrome was noted to be 77.8 %.40% of the study population had mild preoperative pain and 37.8 % had moderate preoperative pain. Incidence of post operative pain from one month to one year after surgery was found to be 73.3 %. The incidence of PBS was found to be highest in patients who presented with locally advanced breast cancer at 46.7%, those with early breast cancer with nodal metastasis, early breast cancer without nodal metastasis and patient who underwent post neo-adjuvant/adjuvant chemotherapy had incidence of 17.8%, 6.7% and 28.9% respectively. Among those having PBS, incidence of mild, moderate, and severe depression was 66.7%, 20% and 11.1% respectively with predilection towards younger age. The highest incidence of PBS was noted in the age group of 49-58 years probably due to the following reasons: lack of preoperative and postoperative psychiatric counselling minimal employment of reconstructive procedures lack of awareness among patients

6. Summary

Phantom Breast Syndrome is Type Of Condition In Which Patients Have A Sensation Of Residual Breast Tissue And Can Include Both Non-Painful Sensations As Well As Phantom Breast Pain that can be managed pre, peri, and post operatively. Pre and post operative counselling to prevent depression and education on course of treatment helps alot. Early diagnosis and treatment has been shown to reduce the incidence of PBS. Reconstrutive procedures done in the same sitting of MRM or BCS have been found to reduce incidence of PBS. Longtem PBS can be managed by anti epileptics and anti depressants TENS therapy capsaicin patches cannabinoids have been found to be useful. PBS significantly reduces quality of life of patients hence actively intervening this condition is found to have profound improvement in patient satisfaction and quality of life in cancer patients and survivors

7. Conclusion

Phantom Breast Syndrome is found to have high incidence hence preference and importance of BCS and reconstructive procedures are emphasized. Adequate pain management and psychiatry follow up have found to have reduced its incidence up to a 30%. This significantly improves quality of life of patient

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Proforma
Name:
Age/Sex:
Address:
Contact No.:
Urban / Rural:
Literacy/Occupation:
Marital Status: Single / Unmarried / Divorcee
No. Of Children:
Menarche:
Menopause:
BREAST FEEDING HISTORY
TYPE OF FAMILY: Joint / Nuclear
FAMILY SUPPORT: Yes / No
SOCIOECONOMIC STATUS: Upper/Upper Middle/Lower Middle/Upper Lower/Lower (using Modified Kuppuswamy Scale)

Presenting Complaints:
Side of Cancer with Staging:

Exclusion Criteria:

- Known cases of Depression:
- Organic brain lesions, Antiepileptics, Antidepressants, Antipsychotics:
- Thyroid:
- Suicidal attempts:
- BCS
- lumpectomy
- Female patients with Breast cancers post MRM aged 60 years and above

Vital Signs:

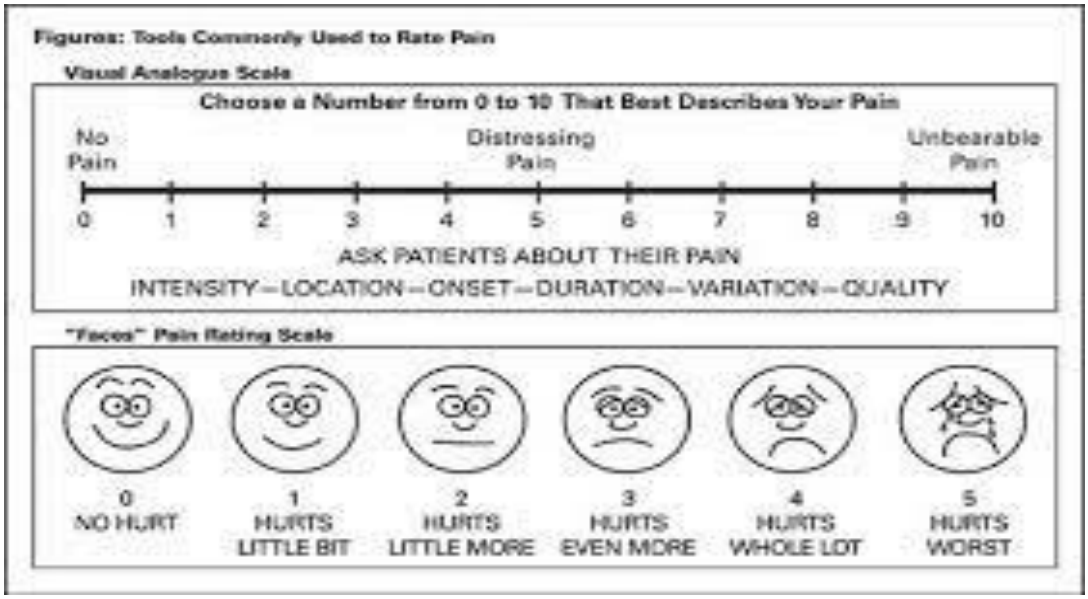
Pulse Rate-Blood Pressure-Resp. Rate-Temperature –

Assessment of Psychiatric Symptoms Using PHQ 9-Patient Health Questionnaire-9

- Score
- Impression

Scoring for Assessment of Phantom Breast Syndrome in CA Breast Patients

S. No	Variable/ factor	0	1	2	3
1	Age	>60	49-59	35-49	18-35
2	Pre operative pain (VAS scale)	Nil /0	Minimal /2-4	Moderate /4-8	High /8-10
3	Time of Pain appearance after Post Op	More than 5 years	3-4 years	2-3 years	1 month – 1 year
4	Stage of CA when operated	Early (no nodal involvement)	Early (ipsilareal nodes involved)	Locally advanced (operable)	Locally advanced post neo adjuvant chemo
5	Surgery underwent	---	MRM with SSG	MRM with flap	MRM without reconstruction
6	Support of family	Very good	Good	average	Poor
7	Depression	Nil	Mild	Moderated	Severe
8	Type of pain (SF-MPQ2)				
9	Total Score				



PHQ 9

Subject Name _____ **Date**_____

Since your hospitalization, how often have you been bothered by any of the following problems? Circle your response.

	Not at all	Some	Often	Nearly all of the time
Little interest or pleasure in doing things	0	1	2	3
Feeling down, depressed, or hopeless	0	1	2	3
Trouble falling or staying asleep, or sleeping to much	0	1	2	3
Feeling tired or having little energy	0	1	2	3
Poor appetite or overeating	0	1	2	3
Feeling bad about yourself – or that you are a failure or have let your family down	0	1	2	3
Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
Moving or speaking so slowly that other people could have noticed. Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3

Total: _____

*Adapted from the original PHQ-9 developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke and colleagues.

Proposed Treatment Action by PHQ 9 Score

PHQ-9 Score	Depression Severity	Proposed Treatment Actions
0-4	Non – Minimal	None
5-9	Mild	Watchful waiting; repeat PHQ 9 at follow-up
10-14	Moderate	Review treatment plan if not improving in past 4 weeks; Consider discussion of additional support such as pharmacotherapy
15-19	Moderately Severe	Consider adjusting treatment plan and/or frequency of sessions; Discuss additional supports such as pharmacotherapy; For SonderMind Anytime Messaging clients, consider converting from asynchronous to synchronous therapy channels
20-27	Severe	Adjust treatment plan; focused assessment of safety plan and pharmacotherapy evaluation/ re-evaluation; If emergent then refer to higher level of care; Likely Not a candidate for asynchronous/text therapy

1	Patient Name	Provisional Diagnosis	Patient Age	Pre Op pain (vas scale)	Time of Pain appearance after Post Op	Stage of CA when operated	Surgery underwent	Family support	Depression	TOTAL SCORE out of 21
2	AMSA	Carcinoma right breast	44	mod	1m-1y	post neo adjuvant	MRM	v.good	sev	15
3	GAYATHRI	Left breast carcinoma	34	mild	1m-1y	LABC	MRM	v.good	MOD	14
4	VIJAYA	right carcinoma breast	54	mod	1m-1y	post neo adjuvant	MRM	good	mild	14
5	BAKKIYALAKSHMI	Right breast carcinoma	37	nil	nil	EARLY NO NODE	MRM	v.good	mild	6
6	RAJESHWARI	Left Carcinoma breast	56	mild	1m-1y	LABC	MRM	v.good	mild	11
7	MANI	right breast carcinoma	54	mild	1m-1y	post neo adjuvant	MRM	v.good	mild	12
8	MOHANA	Left ca breast	50	mild	1m-1y	LABC	MRM	good	mild	12
9	ANEESHA	Left breast carcinoma	56	mod	1m-1y	LABC	MRM	good	mild	13
10	VANAJA	carcinoma left breast	45	nil	nil	EARLY NO NODE	MRM	v.good	mild	6
11	VEERAMMAL	LEFT CA BREAST	40	nil	nil	EARLY NODE	MRM	v.good	MOD	6
12	banumathy	Right carcinoma breast	45	mod	1m-1y	LABC	MRM	v.good	mild	13
13	KOWSLAYA @LAKSHMI	Right breast carcinoma	45	nil	nil	EARLY NODE	MRM	v.good	MOD	8
14	MOHANA	Right breast carcinoma	32	mod	1m-1y	LABC	MRM	good	mild	13
15	GOMATHY	Carcinoma right breast	35	nil	nil	EARLY NODE	MRM	good	MOD	9
16	SASI	Carcinoma right breast	49	mild	1m-1y	post neo adjuvant	MRM	v.good	MOD	14
17	RAHILA @RAILA	Right carcinoma breast	44	mod	1m-1y	LABC	MRM	good	MOD	15
18	VIJAYA	Carcinoma Left Breast	46	mod	1m-1y	LABC	MRM	good	mild	14
19	VEERAMMAL	Carcinoma breast left side	53	mod	1m-1y	post neo adjuvant	MRM	good	mild	14
20	DIVYA@DIVYASREE	Leftbreast carcinoma	50	mod	1m-1y	post neo adjuvant	MRM	good	mild	14
21	SAMUNDESWARI	Left carcinoma breast	59	mod	1m-1y	post neo adjuvant	MRM	v.good	mild	13
22	Jayalakshmi	Left carcinoma breast	40	nil	nil	EARLY NODE	MRM	v.good	MOD	8
23	vijaya meena	Carcinoma right breast	38	mod	1m-1y	post neo adjuvant	MRM	v.good	sev	16
24	HARINI	Right breast carcinoma	59	nil	nil	LABC	MRM	good	mild	8
25	MUTHUMANI	Left breast carcinoma	65	mod	1m-1y	EARLY NODE	MRM	good	mild	12
26	LALITHA	Right Breast carcinoma	47	mod	1m-1y	LABC	MRM	v.good	mild	13
27	CHANDRA	Right carcinoma breast	58	mod	1m-1y	post neo adjuvant	MRM	good	mild	14
28	shanthi	RIGHT CARCINOMA BREAST	48	mild	1m-1y	LABC	MRM	good	mild	13
29	SYED ALI FATHIMA	Right breast duct papilloma	53	mod	1m-1y	post neo adjuvant	MRM	good	mild	14
30	TAMILSELVI	Right CA breast	52	mod	1m-1y	EARLY NODE	MRM	good	MOD	13
31	UDHAYAMATHI	left breast carcinoma	40	mild	1m-1y	LABC	MRM	good	mild	13
32	DHANALAKSHMI	Right carcinoma breast	45	mild	1m-1y	EARLY NODE	MRM	good	mild	12
33	MEENA	Right breast carcinoma	50	mild	1m-1y	LABC	MRM	good	mild	12
34	AMBIKA	Carcinoma left breast	56	nil	nil	LABC	MRM	good	mild	8
35	MUNIYAMMAL	Carcinoma right breast	50	mod	1m-1y	post neo adjuvant	MRM	good	nil	13
36	SISELIYA	Carcinoma right breast	52	mild	1m-1y	LABC	MRM	good	mild	12
37	MANJULA	Right carcinoma breast	55	nil	nil	LABC	MRM	v.good	mild	7
38	bhavani	Right breast carcinoma	29	mild	1m-1y	EARLY NO NODE	MRM	v.good	sev	13
39	ambika	Left carcinoma breast	57	mild	1m-1y	post neo adjuvant	MRM	good	mild	11
40	STELLA MARY	Right breast carcinoma	36	mild	1m-1y	LABC	MRM	v.good	MOD	13
41	sulochana	RIGHT CA BREAST	52	nil	3-4y	EARLY NODE	MRM	good	mild	7
42	VIMALA	Right Breast carcinoma	50	mild	1m-1y	LABC	MRM	v.good	mild	13
43	SANDHYA	Left breast carcinoma	42	mild	1m-1y	LABC	MRM	good	mild	13
44	NANDHINI	Left breast carcinoma	37	mild	1m-1y	LABC	MRM	v.good	mild	12
45	KUMUDHA	Right carcinoma breast	56	mild	nil	post neo adjuvant	MRM	v.good	sev	11
46	NEELAVATHI	Left breast carcinoma	32	mild	nil	LABC	MRM	v.good	sev	12

COLOUR	SCORE
	3
	2
	1
	0

COLOUR	RESULT
	POSITIVE
	NEGATIVE