

## Original Article

# AWARENESS OF PHYSICAL THERAPY REHABILITATION FOR BREAST CANCER RELATED LYMPHEDEMA AMONG MEDICAL ONCOLOGY TEAM - A SURVEY

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## ABSTRACT

**Objective:** To analyse the awareness of physical therapy rehabilitation for breast cancer related lymphedema among medical oncology team member.

**Method and materials:** The data was contents of 12 custom made questionnaires which distributed and collected from 34 medical oncology team members who are working in CMC & H, DMC & H, Chandigarh PGI,

**Results:** Nearly 100 % of clinical oncologist and Radiation oncologist were aware about physical therapy rehabilitation and nearly 80% of Surgeon and Physician were aware about it ( $p < 0.05$ ). Relatively few team members (53%) sent their patients to out patient department of physiotherapy and mostly (47%) not sent ( $p < 0.03$ ).

**Conclusion:** Medical oncology team was aware of role of physiotherapist for breast cancer related lymphedema. But they were concentrating only shoulder activity not in decongestive exercises So, it is important that awareness about physical therapy techniques and its effects to the medical professionals is necessary and also inclusion of physical therapist in the rehabilitation team make lot of difference in the quality of life of Lymphedema patients.

**KEY WORDS:** Lymphedema; Physical Therapy Oncology Rehabilitation; Medical Oncology Team.

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## INTRODUCTION

In the US, breast cancer is the most common cancer amongst women and 1 in 8 women in the US have a chance of developing breast cancer in their life time. In India, the overall incidence of breast cancer is less as compared to the US. Some workers have put it around 1 in 30 or so. But the actual number of cases, in India is not behind.

In the year 2008, there was about 1 in 82,000 breast cancer cases reported in the US, whereas in India 1 in 15,000 new cases were diagnosed. This implies that though because of India's population, the percentage of total women affe-

cted seems less, the breast cancer burden in India has almost reached about 2/3 of that of the US and is steadily rising. <sup>1</sup>

One of the complications of breast cancer treatment is lymphedema of the ipsilateral arm. No consistent operational definition of clinically significant lymphedema as being published. The lack of consensus leads to confusion regarding the incidences of lymphedema after breast cancer treatment.<sup>2</sup> Inconsistent definitions and the lack of a standard classification system have resulted in diverse incidence rates for secondary lymphedema, ranging from 5% to 56% within two years after surgery. <sup>3-7</sup>

Lymphedema is a high protein oedema caused by a low output abnormality of the lymphatic system.<sup>8</sup> Secondary lymphedema caused by damage to the axillary lymphatic system after surgery or radiotherapy for breast cancer can lead to regional or generalized accumulation of lymph fluid in the interstitial space.<sup>9</sup> This condition is the most important chronic complication after dissection of the axillary lymph nodes<sup>3-5</sup> and has a tendency to progress.

Physiotherapy is a part of rehabilitation during the hospital period, particularly in the post operative phase. Patients are instructed how to use the upper limb and how to protect it against that could cause acute infection and add the risk of lymphedema. Patients are assumed to be able to carry out the instruction there after. Some of the patients get more instructions in adaptation courses; some are referred to physiotherapy if post operative complication occurs.<sup>10</sup>

Boman et al, shown the need for information of rehabilitation among breast cancer patients particularly concerning about post operative exercise, how much to lift and work with the operated arm side.<sup>11</sup> Courneya and friendreich were indicated in their survey that physicians might have an important influence on breast cancer patients exercise behavior during treatment.<sup>12</sup>

Mckense & kalda in their two case studies of breast cancer patients showed that no new cases of lymphedema were develop during and five month after a progressive exercise training.<sup>13</sup>

Finney Rutten et al in their research, after the operations patients needed information about the surgery, adjuvant therapy, radiotherapy they had and their side effects and the need for information about rehabilitation was also prominent.<sup>14</sup>

According to previous existing research work, it shows very necessary to bring the awareness about the post operative complications and treatment among the patients who underwent Modified Radical Mastectomy (MRM) .So, the source of knowledge about rehabilitation program for the patients provided by medical oncology team members. Hence, we need to find out that percentage of awareness of physical therapy rehabilitation for breast cancer

related lymphedema among medical oncology team member of major hospitals.

## **MATERIAL AND METHODS**

This study was conducted as a survey based method. The sampling method was a purposeful random sampling technique.

### **Sampling criteria**

#### **Inclusion criteria**

1. Surgeon, Clinical Oncologists, Radiation Oncologists, Physician and Oncology team.
2. Subjects who have more than 5 years of working experiences.

#### **Exclusion criteria**

1. Other medical professionals.
2. Subjects who are under going training in oncology.

**Procedure:** A purposeful random sampling technique was used for collecting data. Screening was done on the basis of inclusion and exclusion criteria. Informed consent form was got signed by medical professionals who worked in CMC &H, DMC &H and Chandigarh PGI. Whole data was collected through the 12 custom made questionnaires which were distributed to 34 Medical professionals personally.

### **Types of Question**

To collect accurate data from the respondent and also to make them convenient, questions have been framed by using different type of questionnaire like multiple choice questions, open ended. The questionnaire was designed to focus on the following points.

1. Qualification of the professional.
2. Complication related to post breast cancer surgery.
3. Types of surgery and its incidence of lymphedema.
4. Consultation by physiotherapist for pre and post cancer surgery and referral of breast cancer patient to physiotherapy OPD for treatment.
5. Are Physiotherapists suitable to deliver an exercise intervention?
6. Physiotherapist is an important team member for rehabilitation of a patient in pre and post breast cancer surgery and prevent further complication, improve quality of life.

7. Professionals were or were not counseling of patient regarding lymphedema. & Advice regarding exercises to the patients.

**Data analysis**

For data analysis SPSS soft ware, version 17 is used for chi-square test on awareness various professional in medical oncology team.

**RESULTS**

A total of 34 participants of the study included 17 Surgeons (50%), 9 Physicians (24.47%), 2 Clinical Oncologists (5.88%) and 6 Radiation Oncologists (17.65%). The majority of the team members (82.4%) who said that secondary lymphedema was a common complication, 100% of the clinical oncologists and radiation oncologists, 88.9% of the physicians and 70.6% of the surgeons. 17.6% of the oncology team members do not recognize secondary lymphedema as a common complication of breast cancer surgery. 29.4% of the surgeons and 11.1% of the physicians made up the group.

The factors found in the lymphedema incidence zone, nearly 41% of the surgeons and 33.3 % of the physicians felt that the type of surgery alone, while 11.8% of the surgeons and 22.2% of the physicians said it's was both the type of surgery and the number of lymph nodes dissected. Among the surgeons 35.3% and 22.2% of the physicians were of the opinion that lymphedma incidence in addition to the earlier two factors the presence of a co-morbidity increased lymphedma.

The referral practices pre and post breast cancer surgery showed that 100% of the oncologists, 83.3% of the radiation oncologists but 41.2 % of

surgeons and 55.6 % of physician were referred to the physiotherapist.

To the question that is suitable to deliver the exercise intervention to breast cancer surgery patients, 82.4% (28) of the respondents were of the opinion that it could be done only by the physical therapist while 5.9 % felt it could be done by the nurses and surgeons also.

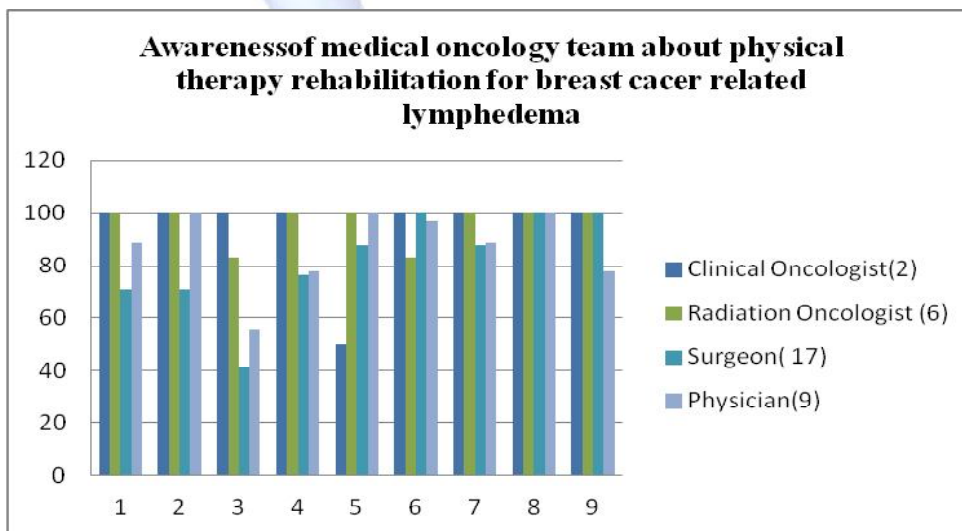
On the question whether the physical therapist is an important team member of a breast cancer treatment team 100 % of radiation oncologists and physician respondents were agreed where as 11.8% of the surgeon and 50 % clinical oncologist were disagreed.

To continued Physical therapy treatment in the Out patient department after discharge was felt as important by 97.1% of the respondents while 2.9% did not feel it was necessary.

Nearly 91.2% of the participants had counseled breast cancer patients with regards to lymphedema. Relatively few team members (53%) sent their patients to out patient department of physiotherapy as a regular follow up and mostly (47%) not sent (p< 0.03).

Ironically 100% of the participants felt that by reducing lymphedema by the physical therapist can improve the quality of life of the patients. All the surgeons, clinical oncologist and radiation oncologists gave regular advice about exercise while 22.2% (2) of the physicians do not do so.

In the graph shows nearly 100 % of clinical oncologist and Radiation oncologist were aware about physical therapy rehabilitation and nearly 80% of Surgeon and Physician were aware about it(p<0.05).





## DISCUSSION

Sandra, Monika (2008) data demonstrate that approximately, two third of those classified with long term Lymphedema developed measurable symptoms by 6 months after surgery. Early diagnosis and treatment of Lymphedema is believed to lead to better outcomes. Consequently the integration of a lymphedema assessment during a routine follow up visit could lead to significant declines in the emotional, physical, and financial costs of lymphedema to breast cancer survivors, as well as society. However appropriate timing of this assessment is crucial.

If assessed too early, as within 3 months of surgery, normal post operative swelling could be misconstrued as evidence of lymphedema. For majority of breast cancer cases, treatment is usually complete within 3 to 6 months after diagnosis. Taking time of treatment cessation in to account, as well as results from this work showing that two third of those with lymphedema developed the condition by 6 months, it seems logical to assess lymphedema status toward the end of the treatment, but definitely by 6 months after surgery.<sup>15</sup>

In our study we found that, the Medical oncology team member reported that lymphedema is one of the common complications after breast cancer surgery & affect upper body functions. After modified radical mastectomy & removal of more than 4 lymph nodes patients have more chances of lymphedema.

The medical oncology team members feel that lymphedema reduction can improve quality of life of patients after breast cancer surgery. They counsel their patients regarding lymphedema & prescribe some exercises to them like active movements to shoulder joint of affected joint & shoulder pulley but not in decongestive exercise to prevent lymphedema. It is interesting to note that only few medical professionals send their patients to physical therapy OPD & most of them do not, although they consider a physical therapist an important team member for rehabilitation of a patient in pre and post operative phase of breast cancer surgery. To the best of our knowledge this is the first study of its kind to take place in India, so our study addresses this gap in the literature.

## Limitation of the study

1. The sample size and demography for the study was small.
2. The response to the questionnaire was subjective.
3. No special exercises were asked in the questionnaire.

## Clinical significance

Physiotherapy plays a vital role in rehabilitation of patients with lymphedema after breast cancer surgery and improves their quality of life. Therefore, awareness about physical therapy among medical oncology team member should be promoted in large scale and more number of patients gets benefit.

## Future scope of study

- 1 Survey can be done in different hospitals in India.
- 2 Comparative surveys can be done to evaluate the awareness among the medical oncology team members to other medical professionals.

## CONCLUSION

Lymphedema is the most common complication after breast cancer surgery. Early physical therapy treatments improve the patient's quality of life. Medical oncology team members felt that physical therapist is an important team member for rehabilitation of breast cancer patients in both pre as well as post operative phase, but few of them send their patients to outpatient physiotherapy department. So, it is important that awareness about physical therapy techniques and its effects to the medical professionals is necessary and also inclusion of physical therapist in the rehabilitation team make lot of difference in the quality of life of Lymphedema patients.

## Conflicts of Interest: None

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