

The Relationship between Early Physiotherapy Intervention and Shoulder Joint Mobility among Breast Cancer Survivors in Sri Lanka

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Breast cancer is the most common cancer among women worldwide, including Sri Lanka. Modified Radical Mastectomy (MRM) is the standard surgical management when the breast conservation is not considered as an option. However, common post-surgical complications of MRM include impairment of shoulder joint mobility and lymphedema which could be managed well with early physiotherapy intervention. This study was aimed to identify the relationship between shoulder joint mobility and early physiotherapy intervention among breast cancer survivors at Apeksha hospital, Maharagama, 74 female breast cancer patients referred to the Department of Physiotherapy for the first time were recruited for this study. Patients with history of shoulder joint injuries or other pathologies were excluded from the study. An interviewer-administered questionnaire was used to collect information of socio-demographic data and underwent surgical procedures. Shoulder joint Active Range of Motions (AROM) (flexion, extension, abduction, Internal Rotation (IR) and External Rotation (ER)) of the affected side was measured by universal goniometer following standard procedure. Delayed period to commence physiotherapy of the sample ranged from < 1 year to 17 years. According to the findings, the mean values of AROM of flexion, extension, abduction, IR, and ER were $157^{\circ} \pm 14^{\circ}$, $51^{\circ} \pm 5^{\circ}$, $137^{\circ} \pm 22^{\circ}$, $70^{\circ} \pm 12^{\circ}$, $75^{\circ} \pm 8^{\circ}$, respectively. A significant negative relationship showed between delayed physiotherapy intervention and shoulder joint AROM of flexion ($p=0.05$, $r=-0.82$), extension ($p=0.05$, $r=-0.54$), abduction ($p=0.05$, $r=-0.75$), IR ($p=0.05$, $r=-0.76$) and ER ($p=0.05$, $r=-0.74$). Therefore, shoulder mobility limitation increases with time of delayed physiotherapy intervention. Hence, it is advisable for patients to participate in early physiotherapy interventions to reduce the level of shoulder immobility.

Keywords: *breast cancer, shoulder mobility, physiotherapy*