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Physiotherapy Management of Post-Operative Breast Cancer Patients: A Qualitative Study

Dragana Cepnja, B.Phyty¹
Katherine Maka, B.AppSciPhyty²

1. Health Professional Educator, Physiotherapy Department, Westmead Hospital, Sydney, New South Wales
2. Senior Physiotherapist, Physiotherapy Department, Westmead Hospital, Sydney, New South Wales

Australia

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ABSTRACT

Purpose: Post-operative breast cancer patients receive physiotherapy to improve range of motion, reduce pain, and increase strength. The aim of this study was to provide qualitative information about which techniques are utilised by physiotherapists in the management of post-operative breast cancer patients in a hospital physiotherapy outpatient department setting in Western Sydney, Australia. **Method:** Common interventions were listed on a survey and physiotherapists were asked to select which treatment interventions they used and the frequency of use. **Results:** A total of 20 surveys were completed out of 25 disseminated. The most commonly used intervention was stretches with 100% of respondents using stretches frequently. This was followed by range of motion exercises with 95% using this intervention frequently. General arm care advice and postural education were frequently utilised by 80% of respondents. **Conclusions:** The most common physiotherapy interventions used in the management of post-operative breast cancer patients were shoulder stretches, glenohumeral joint range of motion exercises, general arm care advice, and postural education.

INTRODUCTION

Post-operative breast cancer patients are commonly referred to physiotherapy for treatment of reduced shoulder complex function and associated pain. It is known that post-operatively, patients can lack shoulder range of motion, experience pain, and have reduced shoulder strength.¹ Evidence supports that physiotherapy can improve shoulder range of motion.² There is growing evidence as to the benefits of strengthening or resistive exercises, including improved strength, improved quality of life, and reduced incidence of lymphoedema.³⁻⁸ Exercise is an important component of the cancer rehabilitation continuum.⁹⁻¹²

Manual therapy, mostly using soft tissue techniques, combined with education and advice has been shown to be beneficial in a single case study of physiotherapy treatment of a post-operative breast cancer patient.¹³ Physiotherapy interventions are also needed to address issues related to lymphoedema, fatigue, pain, and chemotherapy-induced peripheral neuropathy (CIPN).

The aim of this study was to provide qualitative information about which techniques are utilised by physiotherapists in the management of post-operative breast cancer patients in a hospital physiotherapy outpatient department setting in Western Sydney, Australia.

METHODS

A survey form (see Appendix 1) was developed after review of relevant literature by two senior physiotherapists with over 20 years combined experience in the management of post-operative breast cancer patients. This form was then forwarded to 3

other senior physiotherapists working in the field of breast cancer for peer review and comment. The survey was forwarded to a cohort of 25 physiotherapists who are involved in the outpatient care of patients post breast cancer surgery. The selection process was a sample of convenience as these physiotherapists all worked in the physiotherapy outpatient departments of public hospitals within the local health district of Western Sydney, Australia. Physiotherapists were asked to select if they used the listed interventions frequently, occasionally, or never. A further section was labelled "other" where the physiotherapist could list other interventions they may utilise that were not included in the survey.

RESULTS

Twenty completed surveys were returned, giving a response rate of 80%. The respondents had an average of 9.5 years experience (range 6 months to 31 years) working with post-operative breast cancer patients in a hospital physiotherapy outpatient department setting.

The most used intervention was shoulder muscle stretches with 100% of respondents using stretches frequently. Stretches could be active or passive. This was followed by glenohumeral joint range of motion exercises with 95% using this intervention frequently. General arm care advice and postural education were utilised by 80% of respondents frequently. Soft tissue techniques were employed frequently by 60% of respondents and occasionally by 30% of respondents. Strengthening exercises were administered frequently by 45% of respondents and occasionally by 50% of respondents. No other interventions were listed by respondents in the completed surveys.

Table 1. Interventions Utilised By Physiotherapists

Intervention	Frequently (%)	Occasionally (%)	Never (%)
Soft tissue techniques	12 (60%)	6 (30%)	2 (10%)
Shoulder stretches	20 (100%)	-	-
G/H Joint range of motion exercises	19 (95%)	1 (5%)	-
Strengthening exercises	9 (45%)	10 (50%)	1 (5%)
General arm care advice	16 (80%)	3 (15%)	1 (5%)
Postural education	16 (80%)	3 (15%)	1 (5%)
General fitness	3 (15%)	12 (60%)	5 (25%)
Exercise group programs	1 (5%)	6 (30%)	13 (65%)
Hydrotherapy	2 (10%)	7 (35%)	11 (55%)
Passive mobilisations	2 (10%)	11 (55%)	7 (35%)
Electrophysical agent modalities	1 (5%)	4 (20%)	15 (75%)
Neural tension techniques	8 (40%)	7 (35%)	5 (25%)
Taping	1 (5%)	11 (55%)	8 (40%)
Other	-	-	-

Table 1 provides the results for each intervention used frequently, occasionally, and never.

DISCUSSION

The results that the most commonly used techniques were shoulder muscle stretches and glenohumeral joint range of motion exercises were not surprising given that post-operative breast cancer patients frequently experience reduced shoulder range of motion.¹ General arm care advice was also used by three-quarters of respondents frequently because physiotherapists are in a unique position to provide this education given their knowledge and skill in rehabilitation of upper limb function post-operatively. Patients often present to physiotherapy with many questions specific to their upper limb function which have not been addressed by other health professionals.⁶ For example, physiotherapists provide information about return to activity and advice on activity modifications necessary at different stages of the post-operative recovery. The frequent use of postural education is important because many of these patients develop altered shoulder girdle alignment post-operatively as a result of pain, the presence of drain tubes and surgical incisions, inconsistent advice, and body image stigma.¹ The provision of such education may also reflect the holistic approach favoured by many physiotherapists in providing advice and exercises to improve general wellbeing in their patients, including those post breast cancer surgery.²

The results reveal that half the respondents use strengthening exercises occasionally. Given the well known post-operative sequelae of reduced strength and the strong evidence that exists in supporting the positive benefits of strengthening exercises, it could be expected that physiotherapists would include strengthening exercises more frequently.^{5,8}

Similarly, general fitness was used occasionally by sixty percent of respondents. Reduced physical fitness is a common complaint of post-operative breast cancer patients, particularly those patients undergoing adjuvant treatment including chemotherapy and radiation therapy. Recent studies have shown that exercise, even of brief duration, improves the physical fitness of women breast cancer survivors.^{3,14} In light of such evidence, the results do suggest that general fitness may not be utilised as frequently as expected.

A large proportion of respondents reported never using physical exercise group programs. This may reflect the lack of such programs offered in the local hospital community in Western Sydney, Australia.

A limitation of this study is that the physiotherapists surveyed were a convenience sample of physiotherapists working in public hospitals in Western Sydney, Australia. A larger sample of physiotherapists, including those in other regional or rural areas and those working in differing primary work settings, such as community and private practice, would need to be included in future studies to increase the generalizability of results. However, post-operative breast cancer patients receiving physiotherapy are likely to have similar impairments, so we would expect the physiotherapy management to be consistent. It is of note that physiotherapists working in the public hospitals of our health district do not provide lymphoedema management; hence, lymphoedema treatment interventions were not included in this study. Our study looked specifically at physiotherapy treatment interventions for post-operative breast cancer patients, but we acknowledge that there are non-surgical options for breast cancer treatment which may potentially require similar physiotherapy interventions.

CONCLUSION

Based on our results, the most common physiotherapy interventions used in the management of post-operative breast cancer patients in an outpatient hospital setting were shoulder muscle stretches, glenohumeral joint range of motion exercises, general arm care advice, and postural education.

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KEY WORDS

Breast Cancer, Oncology, Physiotherapy, Physical Therapy, Interventions.

APPENDIX A**Survey of physiotherapy treatment techniques used in the post-operative management of breast cancer patients**

How long have you worked with post-operative breast cancer patients?

_____ months or _____ years

Please indicate how often you would use the following interventions if your management of post-operative breast cancer patients:

	Frequently	Occasionally	Never
Soft tissue techniques			
Shoulder muscle stretches			
G/H joint range of motion exercises			
Strengthening exercises			
General arm care advice			
Postural education			
General fitness			
Exercise group programs			
Hydrotherapy			
Passive mobilisations			
Electrophysical agent modalities			
Neural tension glides/stretchers			
Taping			
Other (List)			