Effectiveness of Tai Chi Exercises for Lymphoedema after Treatment for Breast Cancer: A Pilot Study

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Introduction

- Following treatment for breast cancer, 20-45% of women may develop arm swelling (lymphoedema) on their treated side.\(^1,2\)
- The swollen arm and symptoms, including fatigue, may cause considerable distress.
- Current physical management techniques are expensive and not always successful.
- Gentle physical exercise is effective and inexpensive in managing both lymphoedema and cancer-related fatigue.\(^3,5\)

Aim

This study investigated the effectiveness of Tai Chi arm-and-breathing exercises (Shibashi series-1) in reducing upper limb volumes, tissue hardness and subjective symptoms, including fatigue, in women who have clinically discernible lymphoedema following treatment for breast cancer.

Methods

- **Design**: Pre-post, within-subjects design.
- **Participants**: 10 women with arm lymphoedema post-breast cancer treatment.
- **Intervention**: Weekly Shibashi series-1 exercise classes with a qualified instructor for 4 weeks. Participants practiced exercises daily and kept exercise diaries for 8 weeks.
- **Measured variables**: At baseline, 1 and 4 weeks after completing Shibashi classes.
  - Fluid levels measured by bioimpedance and perometry.
  - Tissue hardness measured by tonometry.
  - An 11-point scale assessed 10 lymphoedema symptoms.
  - Brief Fatigue Inventory assessed fatigue.
- **Data analysis**: Descriptive statistics and Wilcoxon Ranks Signs Test (\(p=0.05\))

Results

1. Lymphoedema symptom scores decreased significantly between baseline and four weeks (\(T_{9}=3.5, p=0.007\)).
2. Participants perceived their lymphoedema arm was significantly less tight, heavy, and warm, four weeks after completing Shibashi exercises.
3. No significant changes in fluid volumes, tissue hardness or fatigue scores. (May be due to small sample size and condensed course undertaken.)
4. In a group interview participants revealed they were comfortable exercising among other women with lymphoedema and had found Shibashi exercises beneficial.

Conclusions

Shibashi exercises improved subjective lymphoedema symptoms but not fluid volumes, tissue hardness or fatigue.

References


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