Prehabilitation for Shoulder Dysfunction in Breast Cancer

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Prehabilitation for Shoulder Dysfunction in Breast Cancer


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**BACKGROUND**

Prehabilitation is “a process on the continuum of care that occurs between the time of cancer diagnosis and the beginning of acute treatment, includes physical an psychological assessments that establish a baseline functional level, identifies impairments, and provides targeted interventions that improve a patient’s health to reduce the incidence and severity of current and future impairments.” (Silver et al.)

**MATERIALS & METHODS**

**Design:** Feasibility study with two non-blinded groups randomized by timing of appointment

**Setting:** single site academic tertiary medical center

**Participants:** 60 cancer patients were randomly assigned to either Group 1, n=36, in-person teaching arm or Group 2, n= 24, video-only teaching arm. 45 patients completed the study.

**Interventions:** Shoulder exercises were assigned to both groups 1 month prior to surgery during breast center evaluation.

*Group 1* received in-person instruction on exercises, plus an information sheet with exercises and a link to an on-line video.

*Group 2* received only the information sheet with exercises and a link to the on-line video.

**Main Outcome Measurements:** Exercise compliance, shoulder pain (via visual analog pain scale), and shoulder abduction range of motion (via goniometer), and presence or absence of seroma.

**RESULTS**

- 75% of patients chose to exercise. There was no difference in exercise compliance between in-person teaching vs. video teaching. (75%, 24/32 vs 77% 10/13, OR = 1.03)
- 66% of subjects (20/30) lost greater than 10 degrees of shoulder abduction ROM at 1month post surgery.
- 29% of patients (9/31) had worse shoulder pain than baseline at one month post-surgery (24% of exercisers and 50% of non-exercisers.)
- 15% of patients (4/27) had worse shoulder pain than baseline at 3 months after surgery
- Prehabilitation exercise program inferred no additional risk of seroma formation (Exercisers 21%, 7/33 vs. non-exercisers 22%, 2/9, OR=.94).

**CONCLUSIONS**

- In-person teaching does not appear superior to video teaching for prehabilitation exercises in breast cancer patients.
- Prehabilitation exercises may not increase risk of seroma formation after breast cancer surgery.

Limitations included:

- Variable length to follow-up evaluation of pain and range of motion,
- Variable length of time with postoperative drain,
- Lack of stringent control of types of surgery (mastectomy vs lumpectomy) and other independent exercise performed by subjects.

**References**


