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The Musculoskeletal Consequences of Breast Reconstruction using the Latissimus Dorsi Muscle: A Focus Group Study

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Background

A breast cancer diagnosis and consequent treatments, which often include mastectomy, can be extremely distressing for women. Breast reconstruction following mastectomy is considered an important management option for women to consider [1]. The latissimus dorsi (LD) flap is one of the most widely used surgical procedures for women with breast cancer undergoing reconstructive surgery [2,3]. However, one common, but often ignored, complication following LD flap reconstruction is shoulder dysfunction [4,5]. Previous literature surrounding the impact of LD breast reconstruction has mainly focused on body image, aesthetic results and wound healing [6] with little in-depth investigation of the impact of this surgery on shoulder function [7]. The aim of this study, therefore, was to determine the musculoskeletal consequences of breast reconstruction using LD, and their impact on function and quality of life, as perceived by patients.

Methodology

- Three focus groups were conducted with women who had undergone reconstructive surgery (n=15)
- Women also completed a profile form which collected demographical information including; age, diagnosis, staging of breast cancer, cancer treatments and timelines
 - Shoulder movement was also assessed at the time of the focus groups

All focus groups were audio and video recorded, inductive content analysis was used to analyse transcripts and to develop core themes and sub-themes. A second level of analysis was also conducted whereby information from the participant profiles and the shoulder movement analysis were mapped to the participant's individual statements.

Results

Common Functional Difficulties Reported (≥1 year post-op)

Tightness in the shoulder and back	Pain and discomfort in the donor site
Weakness in grip	Inability to carry heavy weights
Numbness	Reduced power
Cramping	Fatigue

Despite all women encountering various challenges and facing ongoing problems throughout their journey, the women remained positive and reflected on their experience in an optimistic light.

“...it doesn't matter, it doesn't matter if I cant use my arm ever again”

“You appreciate having them worries and being alive”

Women recognised their lack of awareness regarding the potential long-term musculoskeletal implications of surgery, with women recalling pre and post-operative care to be mainly concerning wound healing and aesthetic outcome.

“...no mention of any ill-effects, and shoulder effects”

“At the time you're not really told, 'well this is going to be an impact on your life', but then at the time it's not your concern”

However, it was apparent that the relative importance of overcoming the cancer and recovering from the adjuvant treatments was of higher priority than the potential of reduced function of the shoulder, following surgery.

It was evident from the data that few, if any of the women recovered to their pre-surgery state of shoulder function or strength. Nonetheless, the women accepted this as a consequence of surgery and as a result, accommodated a 'new normal'.

Consequently, 'Resilience' emerged as the overarching theme from the data. Furthermore, three sub-themes emerged including; preparation and awareness, coping and self-management.

Further analysis revealed that based on participant characteristics there were no major influencing factors on the perceived impact of LD breast reconstruction.

Participant Characteristics	Number	%
Age (years)		
Mean (SD)	56 (7.5)	
Range	45 - 71	
Operated Side		
Dominant	6	40
Non-dominant	9	60
Time since Reconstruction (months)		
Mean (SD)	62 (28.9)	
Range	12 - 112	

Conclusions

LD breast reconstruction has an impact on function and activities of daily living to varying extents, irrespective of variables such as age, dominance and time since surgery. Further analysis revealed no major influencing factors on the functional consequences of surgery and supports the preliminary findings around the impact of the surgery, and the consequential coping and resilience demonstrated by the women following LD breast reconstruction.

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