

Lymphedema: Facts and Fiction

S. A. McLaughlin

Department of Surgery, Mayo Clinic Florida, Jacksonville, Florida, USA

▲ Lymphedema is a feared complication of cancer treatment primarily due to its chronic nature and disfiguring appearance[1]. It negatively impacts overall quality of life[2].

Although lymphedema is historically synonymous with breast cancer treatment, it can occur after surgery or radiation for many other types of cancer including melanoma, bladder, sarcoma, penile, prostate, vulvar, cervical, endometrial, or head and neck cancers[3]. Most data quantifying incidence and diagnosis however originate from the vast amount of literature evaluating breast cancer related lymphedema (BCRL) therefore serving as the primary knowledge base.

Although 80-90% of women with BCRL develop symptoms within 3 years of treatment, the risk persists

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for years later with one study finding 50% of women developed BCRL by 20 years follow up[4, 5]. These data reinforce the need for extended follow up and suggest BCRL is common and may be under reported. The persistent controversy surrounding BCRL however remains the lack of uniform diagnostic criteria, variability in measurement techniques, and poor agreement amongst clinicians as to the relationship and relevance of objective and subjective measurements of BCRL. Regardless, emerging evidence supports early identification and intervention for patients developing BCRL. As a result, it is recommended all breast cancer patients receive pre- and post-treatment measurements of both arms using bioimpedance spectroscopy, infrared perometry or circumferential tape measurements[6].

Many risk factors are reported to influence BCRL development including extent of axillary surgery, type of breast surgery, adjuvant chemotherapy and radiation therapy, obesity, and subsequent injury or infection to the ipsilateral arm or hand. However, a large meta-analysis finds the strength of each risk factor and its influence on BCRL varies[7]. The prospective randomized trials vetting sentinel node biopsy support the proportional reduction in BCRL with the minimization of axillary surgery but also acknowledge the persistent lymphedema risk of 0-7% even after sentinel lymph node biopsy. Further, relegating BCRL risk to the number of nodes removed alone appears simplistic as some studies suggest it may be the extent of dissection or inherent patient anatomy or even angiogenic potential that truly influence lymphedema risk[8]. Nevertheless, future studies focus on additional reductions in axillary surgery. Clinicians and breast cancer survivor groups continue to advocate risk reducing behaviors (table 1) to prevent the development of BCRL despite an overwhelming lack of evidence supporting such practices. Adoption of these behaviors appears related to patient education and anxiety as opposed to actual treatment or tumor related factors[9] with most patients following 4-5 risk reducing behaviors. Also there remains inconsistent application of these behaviors across disease sites despite the potential risk for lymphedema. Avoidance of IV catheters and blood pressure measurements and use of compression garments when flying are the commonly recommended practices. However, data supporting these conflict and all suffer from small patient numbers, recall bias, or poor design. To the contrary, the influence of exercise has been rigorously tested prospectively in both affected and at risk patients and found to have little impact on the development or progression of BCRL[10-12].

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Avoid	Adopt
<ul style="list-style-type: none"> • IV or needle sticks • Blood pressure monitoring • Tight clothing • Carrying a purse • Heavy lifting • Crossing legs • Vigorous exercise • Sunburn • Sauna use • Vigorous massage 	<ul style="list-style-type: none"> • Compression garment use especially with flying • Wear gloves when gardening or cleaning • Meticulous nail care

Tab. 1: Commonly recommended risk reducing behaviors to prevent lymphedema

Address for correspondence

S. A. McLaughlin
 Department of Surgery
 Mayo Clinic Florida
 Jacksonville
 Florida 32224, USA
 E-Mail: McLaughlin.sarah@mayo.edu

