Breast Cancer-Related Lymphedema in Black Women: A Narrative Review

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Background

One in five breast cancer survivors will develop breast cancer-related lymphedema (BCRL).1 BCRL is a financially burdensome and debilitating.2 Black women are disproportionately impacted by BCRL. While there is literature that outlines the role of surgical technique in breast cancer related lymphedema incidence, there is a paucity of information on the impact of these factors on the prevalence of BCRL in black women.

Research Objectives

We investigated the role of axillary surgery, adjuvant therapy, comorbid status, and socioeconomic status in BCRL among black breast cancer survivors.

Methods

A literature search for published, full-text articles was performed using PubMed, Web of Science, and Cochrane. Primary research from peer-reviewed journals that targeted patients with lymphedema post nodal dissection and BCRL with outcomes stratified by race were prioritized. Following a thorough title and abstract review and full text screening was performed using Covidence; 18 full articles were included.

Reference


Results

One study of 2,853 breast cancer (BC) survivors reported a two-fold increased risk of BCRL in black women compared to white women (p < 0.05).3 Obesity, hypertension, chemotherapy, and higher rates of ALND (p = 0.03) amongst black women are significantly associated with the development of BCRL.4 A retrospective study of 31,000 nonmetastatic, node-negative BC survivors reported that black women were 12.3% less likely to receive SLNB and significantly more likely to receive ALND compared to white women (p < 0.001).5 The association between radiation therapy and increased risk of BCRL has been reported.6,7 One study found a 5-fold increase in the incidence of lymphedema in patients who underwent ALND combined with radiation therapy compared to patients who underwent ALND alone.8 A prospective study of 166 BC survivors found that black women were significantly more likely to receive radiation therapy as a part of their breast cancer treatment (p = 0.03) and 2-times more likely to experience symptomatic cording after BC treatment compared to non-black women (p=0.013).9 Black women are twice as likely to experience upper extremity disability after BC treatment compared to non-black women (p=0.013; 50-110

Conclusions

Although the biological underpinnings associated with the increased incidence of BCRL in black women remain to be elucidated, radiation therapy and SLNB use contributes to increased incidence of BCRL in black women.

More clinical trials are needed to determine whether treatment of modifiable risk factors and the use of lymphatic reconstructive microsurgical techniques could mitigate BCRL in this patient population.

References