A lymphedema surveillance program for breast cancer patients reveals the promise of surgical prevention

Mandee Hahamoff, BS,a Nachi Gupta, MD, PhD,b Derly Munoz, PT,c Bernard T. Lee, MD,d Pamela Clevenger, RN,e Christiana Shaw, MD,e Lisa Spiguel, MD,e and Dhruv Singhal, MDa,d,*

aDepartment of Surgery, Division of Plastic and Reconstructive Surgery, University of Florida School of Medicine, Gainesville, Florida
bDepartment of Emergency Medicine, Icahn School of Medicine at Mount Sinai, New York, New York
cDepartment of Physical Therapy, University of Florida College of Public Health and Health Professions, Gainesville, Florida
dDivision of Plastic and Reconstructive Surgery, Department of Surgery, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, Massachusetts
eSection of Surgical Oncology, Department of Surgery, UF Health, University of Florida School of Medicine, Gainesville, Florida

ABSTRACT

Background: Breast cancer–related lymphedema (BCRL) is one of the most significant survivorship issues in breast cancer management. Presently, there is no cure for BCRL. The single greatest risk factor for developing BCRL is an axillary lymph node dissection (ALND). Lymphatic Microsurgical Preventative Healing Approach (LYMPHA) is a surgical procedure to reduce the risk of lymphedema in patients undergoing an ALND. We present our single institution results after offering LYMPHA in the context of an established lymphedema surveillance program.

Materials and methods: A retrospective review of our lymphedema surveillance program at the University of Florida was performed over a 2-year period (March 2014–March 2016). LYMPHA was offered to patients undergoing ALND beginning in March 2015. Patients who developed lymphedema were compared with those who did not. Demographics and potential risk factors for development of lymphedema such as age, body mass index, clinical stage, radiotherapy, and chemotherapy were reviewed.

Results: Eighty-seven patients participated in the surveillance program over the study period with an average age of 60 y (range 32-83) and body mass index of 30 kg/m² (range 17-46). The single most significant risk factor for the development of lymphedema was an ALND (P < 0.001). One of 67 patients undergoing a sentinel lymph node biopsy developed lymphedema (1.5%). Four of 10 patients who underwent an ALND alone developed...
lymphedema (40%). One of 8 patients in the ALND + LYMPHA group developed transient lymphedema (12.5%).

Conclusions: Offering LYMPHA with ALND decreased our institutional rate of lymphedema from 40% to 12.5%. Long-term follow-up and randomized control trials are necessary to further elucidate the promise of this surgical technique to reduce the incidence of BCRL.

Materials and methods

A retrospective review of our lymphedema surveillance program at the University of Florida was performed. This retrospective review was approved by our internal review board with a waiver of documentation of informed consent. In March 2014, we initiated a lymphedema surveillance program where all newly diagnosed breast cancer patients were offered a lymphedema evaluation preoperatively and were followed by standard protocol postoperatively. Each evaluation, preoperatively and postoperatively, consisted of three components: (1) evaluation by a certified lymphedema therapist for signs and symptoms of BCRL, (2) circumferential measurements, and (3) bioimpedance spectroscopy. Lymphedema was defined as having signs/symptoms of BCRL and one positive objective measure. If a patient’s lymphedema was diagnosed within 6 mo of their final oncologic treatment (chemotherapy, radiotherapy, and surgery), the lymphedema was defined as transient. If the lymphedema was diagnosed or continued beyond 6 mo after their final cancer treatment, it was defined as lymphedema.

Newly diagnosed breast cancer patients with unilateral disease participating in our surveillance program over a 2-year period (March 2014–March 2016) were included in the study. Participation in the program was defined as presenting for a preoperative lymphedema assessment and a minimum of one postoperative assessment. Baseline demographics (age, BMI, prior radiation, or chemotherapy), cancer treatment characteristics (chemotherapy, type of radiation treatment, and surgical management), and physical therapy evaluations (circumferential measurements, bioimpedance spectroscopy data, and follow-up) were included in the analysis.

Surgical technique

From March 2014 to February 2015, all patients undergoing an ALND underwent the procedure in standard fashion,
دریافت فوری متن کامل مقاله

امکان دانلود نسخه تمام متن مقالات انگلیسی
امکان دانلود نسخه ترجمه شده مقالات
پذیرش سفارش ترجمه تخصصی
امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
امکان دانلود رایگان ۲ صفحه اول هر مقاله
امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
دانلود فوری مقاله پس از پرداخت آنلاین
پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات