



Contact:

Jeanne-Marie Phillips
HealthFlash Marketing
203-977-3333
jphillips@healthflashmarketing.com

Sharon Grutman
The American Society of Breast Surgeons
877-992-5470

Risk-Reducing Nipple-Sparing Mastectomies Highly Effective for BRCA Patients

New Research and Procedures Support Surgeries with Superior Cosmetic Results

Abstract: Multi-Institutional Study of the Oncologic Safety of Prophylactic Nipple Sparing Mastectomy in a BRCA Population

Dallas, April 14, 2016--Women with deleterious BRCA gene mutations can safely take advantage of the superior cosmetic results of nipple-sparing mastectomies without compromising risk reduction, according to a new study presented this week at the American Society of Breast Surgeons Annual Meeting. The largest study of its kind, the research involved robust data from multiple, well-respected medical centers.

“We need strong evidence supporting the safety of purposely leaving ductal tissue in the breast in a risk-reduction procedure because most breast cancers are of ductal origin,” comments James Jakub, M.D., section head breast and melanoma surgery, Mayo Clinic. “However, with a growing understanding of the nature of nipple tissue itself, modern nipple-sparing surgical techniques and a growing body of research similar to our new study, many surgeons believe this is an effective risk-reducing approach for the BRCA population.”

The retrospective analysis involved a total of 551 prophylactic mastectomies in 348 patients from nine medical institutions from 1968 to 2013. Of these, 145 patients had a single breast removed prophylactically secondary to a current or prior breast cancer, while 203 had both breasts removed for risk reduction. Patients found to have an occult cancer in the prophylactic breast were excluded. Mean follow up was 34 months. Patients included 204 with BRCA1 and 144 with BRCA2 mutations.

In the study, no bilateral mastectomy patients developed breast cancer at any site. No breast cancers developed in any group in the skin flaps or underlying tissue, nipple areola complex mastectomy scar, chest wall or regional lymph nodes on the side of a prophylactic procedure. Seven patients who died

from breast cancer during the study had a prior or an existing cancer at the time of their risk-reducing surgery in the opposite breast, and their stage IV disease was attributed to that cancer.

“A growing body of knowledge suggests that the nipple surface is composed of skin cells while the ductal tissue where cancer arises is located deeper within the breast,” says Dr. Jakub. “Based on this, modern nipple-sparing mastectomies dissect the nipple and areola in an extremely thin layer close to the skin. Unlike prior techniques that left a thick layer of breast tissue below the nipples, the process is almost akin to a skin graft,” he explains.

While no prophylactic procedures completely eliminate breast cancer risk, this study and a growing body of evidence suggests that today’s nipple-sparing techniques are extremely safe and highly effective at breast cancer prevention, Dr. Jakub notes. However, the implications of this study are somewhat limited by the relatively short follow up period and the lengthy time span of the data.

These procedures preserve the entire envelope of breast skin and nipple, restoring breast volume with an implant or flap. “Assuming the surgery is complication-free, with today’s nipple-sparing techniques women with BRCA can look forward to very effective risk reduction with a very superior cosmetic outcome. However, the nipple will unfortunately not have stimulation or arousal,” he comments.

Abstract, Official Proceedings

Presenter: James Jakub

Institution: Mayo Clinic

Title: Multi-Institutional Study of the Oncologic Safety of Prophylactic Nipple Sparing Mastectomy in a BRCA Population

Objective: Nipple-sparing mastectomy (NSM) is gaining wide acceptance as a result of the superior cosmetic results when successful; however, its role in a BRCA population remains controversial. Our aim was to determine the incidence of breast cancer developing in female BRCA carriers following a prophylactic NSM.

Methods: Multi-institutional retrospective review of patients with a deleterious BRCA mutation undergoing a risk-reducing NSM between January 1, 1960, and December 31, 2013. Patients with a diagnosis of breast cancer and undergoing a contralateral risk-reducing mastectomy were included, but only the risk-reducing side was included in the analysis. Breasts with high-risk lesions (ALH, ADH, ADP, FEA, or LCIS) identified preoperatively or on final pathologic analysis of the mastectomy specimen were included in the analysis. Patients found at the time of prophylactic mastectomy to have an occult cancer in the prophylactic breast were excluded, as were patients with a variant of unknown significance (VUS) or a free nipple graft.

The primary endpoint was development of a new primary breast cancer (DCIS and/or invasive breast cancer) in the surgical field following a risk-reducing NSM. This included events of the ipsilateral skin flaps, subcutaneous tissue, nipple areolar complex (NAC), chest wall, or regional lymph nodes ipsilateral to the risk-reducing mastectomy.

Results: A total of 551 risk-reducing NSMs were performed in 348 patients from nine institutions over the time period (cases per institution, 1-91). Two hundred three patients underwent a bilateral prophylactic NSM and 145 patients underwent a unilateral risk-reducing NSM secondary to a previous or current breast cancer in the contralateral breast. Two hundred four patients had a BRCA1 mutation and 144 a BRCA2 mutation. With a median follow of 34 months and mean follow-up is 56 months, no breast cancers developed in the ipsilateral skin flaps, subcutaneous tissue, NAC, mastectomy scar, chest wall, or regional lymph nodes on the side of the prophylactic procedure. None of the patients who underwent a bilateral risk-reducing NSM developed breast cancer at any site. Twelve patients died during follow-up--seven from breast cancer, three from ovarian or fallopian tube cancer, and two from other causes. All seven patients who died from breast cancer had a previous or synchronous contralateral breast cancer at the time of their prophylactic procedure and their stage IV disease was attributed to the known cancer.

Conclusion: NSM is highly preventative against breast cancer in a BRCA population.

