A Study of the Factors that Influence the Nipple Sparing Mastectomy Decision-Making Process

Ricardo J. Bello, MD, MPH; Regina S. Cho, BS; Isabella Guajardo, BS; Gedge D. Rosson, MD;

Carisa M. Cooney, MPH; Michele A. Manahan, MD

INTRODUCTION: Nipple-Sparing Mastectomy (NSM) is oncologically safe[1] and aesthetically superior[2] in select patients. However, despite its inclusion in breast cancer management guidelines (i.e. NCCN, American Society of Breast Surgeons) the adoption of NSM has been slow.[3, 4] In this study, we explored factors that influence the decision-making process between NSM and Skin-Sparing Mastectomy (SSM) in women undergoing mastectomy and breast reconstruction.

MATERIALS AND METHODS: After IRB-approval, trios consisting of patients, surgical oncologists and plastic surgeons completed questionnaires and debriefing on NSM eligibility and decision-making. We used Chi-square and t-test to compare outcomes.

RESULTS: We enrolled 15 patients, 5 surgical oncologists and 3 plastic surgeons. Mean patient age was 48.6 years (range: 23-71). Ten patients consulted for therapeutic and 5 for prophylactic mastectomy. Six of the 15 trios had complete agreement on eligibility for NSM, while another 5 agreed on eligibility but not on specific reasons for it. Complete agreement on eligibility for NSM was higher among surgical oncologists and plastic surgeons (57% of cases) than between the physicians and patients (43%, $p<0.001$). Patients seen by both surgeons within one week (8/15; 53%) were more likely to have complete agreement than patients seen at longer intervals ($p=0.005$). Twelve surgical oncologist consultations (80%) included discussions of NSM, all of which were initiated by surgical oncologists. Fourteen plastic surgeon consultations (93%) discussed NSM, 11 of which (85%) were initiated by plastic surgeons. Of 9 patients eligible for NSM, 5 (56%) underwent NSM.

DISCUSSION: Our findings suggest that there is room for improvement in physician-patient and inter-physician communication on NSM eligibility, emphasizing the importance of timely and multidisciplinary coordination. Most conversations about NSM are not initiated by patients; moreover, patient-physician agreement is lower than inter-physician agreement, which highlights the need for enhanced patient education on surgical treatment options. These findings are especially relevant given the passing of the Breast Cancer Patient Education Act by Congress in December 2015,[5] providing a potential route to enhance physician-patient communication and influence patients' ability for fully-informed decision-making.

REFERENCES:

1) De La Cruz L, Moody AM, Tappy EE, Blankenship SA, Hecht EM. Overall Survival, Disease-Free Survival, Local Recurrence, and Nipple-Areolar Recurrence in the Setting of Nipple-Sparing Mastectomy: A Meta-Analysis and Systematic Review. Ann Surg Oncol. 2015;22(10):3241-9.
2) Moyer HR, Ghazi B, Daniel JR, Gasgarth R, Carlson GW. Nipple-sparing mastectomy: technical aspects and aesthetic outcomes. Annals of plastic surgery. 2012;68(5):446-50.
3) Agarwal S, Agarwal S, Neumayer L, Agarwal JP. Therapeutic nipple-sparing mastectomy: trends based on a national cancer database. American journal of surgery. 2014;208(1):93-8.
4) McLaughlin SA. Surgical management of the breast: breast conservation therapy and mastectomy. The Surgical clinics of North America. 2013;93(2):411-28.
5) 114th United States Congress. Breast Cancer Patient Education Act of 2015 USA [cited 2016 06/22/2016]. Available from: https://www.congress.gov/bill/114th-congress/senate-bill/1192/text.