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Discussion of: “Risk-Benefit Relationship of Contralateral Prophylactic Mastectomy: The argument for Bilateral Mastectomies with Immediate Reconstruction”

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This study is a retrospective, single surgeon, evaluation of 244 consecutive patients with unilateral breast cancer who underwent either unilateral mastectomy (UM) 68 (28%), or unilateral mastectomy with contralateral prophylactic mastectomy (CPM) 176 (72%). Patients with bilateral disease, or those who underwent risk reducing bilateral mastectomy for genetic predisposition (i.e BRCA mutation) were excluded from the analysis. Reconstruction methods included autologous tissue 146 (60%) and implant based 98 (40%). Thirty-day complications were analyzed and compared between the unilateral and bilateral patients (1).

The authors noted no statistically significant difference in 30-day complications that required either readmission to the hospital or return to the operating room between the two cohorts. Of the 176 patients who underwent CPM, 13 (7%) had invasive ductal (IDC), invasive lobular (ILC), or ductal carcinoma in situ (DCIS) in the contralateral prophylactic specimen. An additional 8 (5%) had lobular carcinoma in situ (LCIS) in the prophylactic specimen. These results stand in contrast to a much larger study from 2010 (2) of 1,223 mastectomies which identified occult invasive cancer in only 8 (2.8%) of CPM specimens. Thus, there is concern for sample bias in the current study because of the high rate of breast cancer found in prophylactic mastectomy specimens. The authors grouped DCIS, IDC and ILC together in the analysis. It would be interesting to know how many patients had invasive cancer (IDC, ILC), versus DCIS in the CPM specimens.

Based upon the low complication rate, the incidence of occult disease, and the potential long-term cost savings of ongoing screening of the contralateral breast, the authors make a case for bilateral mastectomy and immediate reconstruction in patients with unilateral breast cancer. What is not clearly explained in this series is the disproportionately high rate of occult disease in the contralateral breast. Did some of these patients have a deleterious genetic mutation that was not screened for? Importantly, no information is presented in the current study about the preoperative evaluation of the index or contralateral breast. The sensitivity of MRI to detect lesions preoperatively, compared to mammograms, would likely

have an impact on surgical treatment on the non-index breast. One would expect a higher rate of pre-mastectomy diagnosis of disease.

The authors also note that the 30-day complication rate was not statistically different between the unilateral and bilateral mastectomy patients. The majority of the reconstructions in this series were autologous (60%). Interestingly, in a recent systematic review of unilateral and bilateral DIEP flap breast reconstructions, there was a significantly higher incidence of risk of total flap failure in the setting of bilateral reconstruction (3). Using the MROC Mastectomy Reconstruction Outcomes Consortium data which was a multicenter study of over 1000 women, bilateral autologous and implant reconstructions were associated with an odds ratio of 1.73 higher risk of complications compared with unilateral reconstructions (4). Despite the traditional 30-day morbidity assessment, practitioners who perform breast reconstruction (particularly prosthetic breast reconstruction) know that complications can occur months or years after initial reconstruction. Capsular contracture, infection, and device malposition are well known late complications that are not addressed in this analysis.

The authors enthusiasm for CPM needs to be tempered by the constraints faced by our health care system. Currently, healthcare costs in the US exceed greater than 18% of our gross domestic product. CPM is unlikely to be a principle contributor to this escalation. However, it is clear that rising cost of US healthcare can crowd out other necessary services including infrastructure, schools, etc. People also need to be aware of who is paying for CPM. The structure of most insurances is that of a shared risk-pool whereby the higher costs of less healthy patients are offset by the relatively lower costs of the healthy individuals. It is unclear how the general US population feels about rising insurance premiums being put towards CPM and would be a worthy subject of investigation. Although acknowledged as a limitation of the study by the authors as a limitation in this study, a validated patient reported outcomes analysis (i.e. Breast-Q) was not utilized to determine the patient's perspective on unilateral versus bilateral mastectomy. Such information is likely to help guide patients with their decision making perioperatively. Based upon the high incidence of occult disease and the low morbidity reported in this study, do the authors routinely recommend CPM to their unilateral breast cancer patients?

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