

Advances in Nipple Sparing Mastectomy: Multi-institutional analysis of Patient Selection and Oncologic Safety

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Background

Nipple sparing mastectomy (NSM) has been controversial but with an expanding body of published experience, this approach is gaining acceptance and wider application. The purpose of this multi-institutional report is to confirm oncologically safe principles for patient selection and operative technique.

Methods

From 2007-2009, 112 consecutive patients (202 breasts) were candidates for NSM. All patients underwent preoperative MRI (magnetic resonance imaging) to assess: tumor size, distance from nipple, and additional disease within ipsilateral/contralateral breast or axillae. Exclusion criteria included: tumors larger than 3 cm, clinical invasion of the NAC, tumors within 2 cm from the nipple, evidence of multicentric disease, positive intra-operative retro-areolar frozen section, positive specimen nipple margin on permanent sections or extensive nodal disease. Fourteen patients were excluded from the study. Data collected included patient demographics, cancer type and stage, complications, adjuvant therapies, and recurrence.

Results

98 patients (186 breasts) had NSM. Risk reducing mastectomies (45 patients) and therapeutic mastectomies were performed for 53 patients (stage 0 (DCIS) in 26 patients; stage 1A in 24 patients, stage 1B in 3 patients). Disease-free survival was calculated from date of surgery to any local, regional or distant relapse, whichever occurred first. The average age was 43 years (range: 28-65). Of the 186 immediate reconstructions, 4 breasts had pre-operative radiation and none underwent postoperative radiation. Neoadjuvant therapy was administered to 7 patients. Average follow up included 28.7 months (16-49months). None failed expander implant reconstruction. No recurrence at current follow up and the following was noted: 167 breasts with Baker 1, 19 breasts with Baker 2, and 0 breasts with Baker 3.

Conclusion

NSM is evolving and should be considered a good treatment option in carefully selected patients. These findings add to the growing body of evidence that with proper patient selection and operative technique, NSM is a safe and effective option for patients requiring therapeutic or prophylactic mastectomy.