ONE STEP IMPLANT RECONSTRUCTION IN NIPPLE SPARING MASTECTOMY: PATIENT SELECTION BY PREOPERATIVE DIGITAL MAMMOGRAM

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BACKGROUND:

Digital mammography clearly distinguishes gland tissue density from the overlying nonglandular breast tissue coverage, which corresponds to the existing tissue between the skin and the superficial layer of the fascia superficialis surrounding the gland (i.e., dermis and subcutaneous fat). Preoperative digital imaging can determine the thickness of this breast tissue coverage, thus facilitating planning and reducing the rate of necrotic complications after direct to implant (DTI) reconstruction in nipple sparing mastectomy (NSM).

MATERIAL & METHODS

Thirty NSMs in 22 patients with type 3 tissue coverage (subcutaneous tissue thickness of 2 cm or more) were selected for DTI reconstruction after NSM to evaluate immediate skin flap/nipple areola complex ischemic complications and patient satisfaction. Results: We experienced no wound healing problems or ischemic complications immediately after surgery in our population. Only 1 seroma was observed as a shortterm complication. Quality of life and patients’ satisfaction level were optimal at 3 and 6 months follow-up, respectively. The aesthetic results have been evaluated as good/ excellent in all cases.

Fig. 1. Digital mammograms showing tissue coverage to be maintained during mastectomy (A) and different types of tissue coverage in different patients with the same breast volume (B).

Table 1. Breast Tissue Coverage Classification According to Digital Mammogram

Type 1	Up to 1 cm	Poor coverage
Type 2	Between 1 and 2 cm	Medium coverage
Type 3	More than 2 cm	Good coverage

Fig. 3. A 42-year-old patient with DCIS on her left breast, with previous biopsy (BRCA+). Bilateral NSM; immediate bilateral DTI reconstruction was performed with Mentor CPG shaped 323 345cc. A, Preoperative digital mammogram showing a type 3 breast. B–D, Frontal and oblique preoperative views. E–F, Frontal and oblique 10-month postoperative views. The scar running through the NAC was due to a surgical accident by excessive tension with the retractors during surgery (described as a complication in Table 3, patient 15).

Table 4. Patient Satisfaction Scores for the SF-36 Questionnaire

Subscale	Median	Range
Physical health		
Physical functioning	84	82–87
Body pain	78	76–81
Role limitation due to physical problems	77.5	73–82
General health	74	71–76
Mental health		
Social functioning	85.5	83–88
Role limitation due to emotional problems	77	72–80
Mental health	74	70–78
Vitality	60	57–63

SF-36, 36-item short-form health survey.

CONCLUSIONS

DTI immediate reconstruction with silicone implants following NSM appears to be a safe option in selected cases with enough tissue coverage, also providing a high level of patient satisfaction. The possibility of selecting cases for this procedure according to the preoperative digital mammogram showing more than 2 cm of superficial tissues thickness may help reducing the risk of immediate ischemic complications

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