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BACKGROUND: With rising breast reconstruction rates, questions remain on the impact of shifting modalities of reconstruction and concurrent treatments on quality-of-life (QoL). This study aimed to track QoL in breast reconstruction patients according to reconstructive modality and PMRT.

METHODS: We prospectively followed patients undergoing breast reconstruction from 2010–2015 using BreastQ© and RAND-36 preoperatively, after tissue expander placement, and 6 and 12 months after final reconstruction. We used Wilcoxon signed-rank test, ANOVA, and multiple linear regression to estimate associations between QoL, reconstruction type and timing, and post-mastectomy radiotherapy (PMRT).

RESULTS: Of 300 patients followed, 124 underwent implant-based, 151 autologous, 10 mixed implant and autologous, and 15 pure fat grafting reconstructions. Forty-four were immediate, 202 staged, and 54 delayed. Seventy-seven patients received PMRT. Postoperatively, QoL increased for Satisfaction with Breasts, Psychosocial Wellbeing, and RAND36 Summary Mental Health (p<0.01), whereas Physical Wellbeing of Abdomen decreased in autologous reconstruction patients (p<0.001). Autologous reconstruction was associated with higher Satisfaction with Breasts (p<0.001) and trended toward higher Psychosocial Wellbeing (p=0.095) and RAND36 Physical Health Summary Score (p=0.074). Delayed reconstruction was associated with higher Satisfaction with Breasts (p=0.003), Psychosocial Wellbeing (p=0.044), and Sexual Wellbeing (p=0.018). After adjusting for confounding, PMRT was associated with lower Sexual Wellbeing (p=0.021) and trended toward lower Psychosocial Wellbeing (p=0.081) and Physical Wellbeing of Chest (p=0.081). PMRT showed interaction with the type of reconstruction, wherein autologous reconstruction significantly mitigated the negative impact of PMRT on Physical Wellbeing of Chest (p=0.006) and showed a trend for Satisfaction with Breasts (p=0.081).

CONCLUSIONS: Autologous and delayed reconstruction are associated with greater increases in QoL. Autologous reconstruction may mitigate negative effects associated with PMRT. These findings are important in an economic environment driving trends towards implant-based and immediate breast reconstruction.

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Prospective Evaluation of Quality of Life for Patients with Breast Cancer Treated with Breast Conserving Surgery, Mastectomy Alone and Mastectomy with Immediate Breast Reconstruction

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PURPOSE: To evaluate the change in satisfaction and quality of life between early breast cancer patients treated with breast conserving surgery (BCT), mastectomy alone (MA) or mastectomy with immediate breast reconstruction (IBR) at one year after surgery using the BREAST-Q.

METHODS: All early stage (Stage 0–2) breast cancer patients treated at a single tertiary care center between 2015 and 2017 were enrolled. Their quality of life and satisfaction outcomes were compared using the BREAST-Q breast satisfaction (BS) and psychosocial well being (PSW) scales at 12 months. A multivariate linear regression was performed to assess changes in BS and PSW scores between baseline and 12 months. Clinically relevant and statistically different baseline factors were incorporated in the multivariable model; these include age, income, education, ethnicity, cancer stage and laterality.
RESULTS: A total of 242 early stage breast cancer patients (Stage 0–2) were prospectively enrolled; 107 underwent BCT, 56 MA and 79 IBR. Patient’s in the BCT group were older at baseline (60 ± 11 years old) compared to MA (52 ± 12 years) or IBR (49 ± 10 years) (p<0.0001). The majority of IBR cases were bilateral (66%), whereas they comprised only 32% of MA and 5% of BCT (p<0.0001). Education, income, and ethnicity were comparable between groups at baseline. The three groups had similar baseline BS and PSW scores (p=0.17 and p=0.71). At 12 months, BCT had the highest BREAST-Q scores, with 68/100 for BS and 79/100 for PSW (p<0.0001), compared to, respectively, 57 and 65 for IBR, and 48 and 57 for MA. After multivariable regression accounting for patient’s age, income, education, ethnicity, cancer stage and laterality, BS BREAST-Q change from baseline to 12 months was not statistically different for BCT and IBR (p=0.0662), while MA patients experienced lower BS compared to BCT (p=0.0001). IBR patients had no different BS when compared to MA (p=0.16). With regards to PSW, similar patterns were present. IBR patients had no different PSW than BCT (p=0.25), while MA patients experienced lower wellbeing compared to BCT (p<0.0001). IBR had higher PSW compared to MA (p=0.0039).

CONCLUSION: This large prospective study highlights that changes in breast satisfaction and psychosocial wellbeing at 12 months for BCT and IBR are no different in early stage breast cancer patients, but are significantly reduced in MA. This study is the first to compare BREAST-Q outcomes between BCT, MA and IBR, and provides important evidence to support the use of BCT and IBR to optimize long-term quality of life and breast satisfaction for early stage breast cancer patients.

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DIEP flaps in Women with Abdominal Scars: A Comparison of Complication Rates between Different Abdominal Incisions

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PURPOSE: There are still concerns that abdominal surgery can compromise an abdominally based perforator flap in microsurgical breast reconstruction. With this study, we take a closer look at the effect of prior abdominal incisions on Deep Inferior Epigastric Artery Perforator (DIEP) flap and donor site complications, with a particular focus on the different types of incisions and their influence on surgical outcomes.

METHODS: A retrospective case-control study was conducted over a 6-year period. 544 consecutive DIEP flaps were divided into a control group without previous abdominal surgery, and an incision group with previous abdominal surgery. A comparison between both groups was made in terms of flap and donor site complications, followed a sub-group analysis based on the type of abdominal incision.

RESULTS: 223 flaps were included in the incision group and 321 in the control group. There were no significant differences between groups in terms of age, flap weight, smoking history, prior radiation history and comorbidities. We found a higher BMI in the incision group (p=0.01). There were no significant differences between the control group and the incision group in terms of flap complications (complete flap loss, partial flap loss and fat necrosis). However, donor site complications, specifically wound separation was found to occur at a higher incidence in the incision group (p=0.0001). In the sub-group analysis, patients with a low transverse incision had higher rates of fat necrosis (8.0% vs 23% p=0.0001) and donor site wound separation (9.0% vs 23% p=0.002). No statistically significant differences were found between patients in the control group and those with laparoscopic incisions on the one hand, and those with a combination of laparoscopic and low transverse incision on the other.

CONCLUSION: The results from this large series of consecutive DIEP flaps from our institution confirms that autologous breast reconstruction with a DIEP flap can be safety performed in patients who have had previous abdominal surgeries; however, patients must be made aware of the increased risk of donor site complications.

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