47.6% and 42.0% of all flaps performed, respectively. In the HS group, TRAM flaps comprised the vast majority of free flaps (72.6%). Mean anastomosis time was reported in five VC studies (4.46 minutes, 1,573 flaps) and only in one HS study (21 minutes, 887 flaps). Venous complications occurred in 143 flaps (2.61%), overall. There was a significantly decreased venous complication rate in the VC group as compared to the HS group (1.54% vs. 3.89%, p<0.0001). Venous complications were further categorized by etiology (e.g., thrombosis, mechanical kinking, insufficiency, etc.). Thrombosis accounted for the majority of venous complications in both the VC and HS groups (89.1% and 96.9%, respectively). The VC group experienced significantly reduced total flap failure rate (0.38% vs. 1.18%, p=0.0032) and return to the operating room (1.58% vs. 3.90%, p<0.0001) as compared to the HS group. Salvage rates in the VC and HS groups were 81.6% and 73.0%, respectively (p=0.7576).

CONCLUSION: Evolutions in both microvascular technique and technology have improved safety and outcomes in autologous breast reconstruction. Our study demonstrates the benefits of using VC as opposed to HS anastomosis in this patient cohort due to its efficiency of use, favorable venous complication rate, reoperation rate, and overall flap survival rate.

Nipple-Sparing Mastectomy and Breast Reconstruction with a Deep Inferior Epigastric Perforator Flap Using Thoracodorsal Recipient Vessels and a Low Lateral Incision

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BACKGROUND: Increased incidence of nipple-sparing mastectomies poses challenges in providing aesthetically-pleasing and inconspicuous scars especially in the setting of autologous breast reconstruction. A unique technique of nipple-sparing mastectomy breast reconstruction using free flaps and the thoracodorsal (TD) system is described.

METHODS: Between December 2010 and 2016 December, patients who underwent autologous reconstruction using TD recipient vessels were investigated. Complication and revision rates were compared to using the internal mammary (IM) vessels. Patient reported outcomes were determined.

RESULTS: 79 nipple-sparing mastectomy reconstructions, 30 used TD and 49 used IM recipient vessels. There was not a significant difference in age, BMI, ischemia time, and specimen/ flap- harvested /flap-used weights between two groups. There was a statistically significant difference in artery size (p =0.01), the IM artery 2.7±0.43 large than the TD artery 1.8±0.4. There was not a statistical difference with breast hematoma, infection, partial flap loss, re-open rate, flap failure, fat necrosis, abdominal site hematoma, hernia/bulge, umbilical wound dehiscence, or total complications between two groups. Breast-Q “psychosocial well-being” had a statistically significantly higher score in the TD group (p = 0.04), the mean score was 83.9±14.6 in the TD group and 72.8±14.6 in IM group.

CONCLUSION: This technique provides a low lateral, and inconspicuous incision in nipple-sparing mastectomy with autologous breast reconstruction with a low complication and revision rate and higher psychosocial well-being scores than IM vessels.

Pre-Pectoral Vs. Sub-Pectoral Breast Reconstruction-a Matched-Pair Analysis of Clinical Outcomes

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BACKGROUND: The development of acellular dermal matrices (ADM) has revolutionized implant-based breast reconstruction. The most recent development has been the introduction of pre-pectoral breast reconstruction. While it is associated with decreased postoperative pain and prevention of animation deformity, concerns have been expressed related to the quality of soft tissue coverage as
well as infectious complications. Hence, we felt it prudent to perform a matched-pair analysis of clinical outcomes following pre-pectoral and sub-pectoral tissue expander placement.

METHODS: A retrospective study of patients who underwent immediate breast reconstruction by means of pre-pectoral (Group 1) and sub-pectoral (Group 2) tissue expander placement was performed. Patients in each group were matched for age, BMI, history of neoadjuvant radiotherapy, and type of ADM. Of note, patients in Group 1 received perioperative antibiotic prophylaxis for less than 24 hours while patients in Group 2 received antibiotic prophylaxis for at least 1 week.

RESULTS: A total of 80 patients (138 breast reconstructions) were included in the study (Group 1: N=40; Group 2: N=40). No difference in total postoperative complication rate (p=0.356) and mastectomy skin necrosis rate (p=1.0) was noted. A trend towards a higher rate of major complications was seen in Group 2 (p=0.06). Similarly, while not statistically significant, a trend towards a higher rate of major infection (p=0.09) and loss of reconstruction (p=0.09) was noted in Group 2.

CONCLUSION: Immediate pre-pectoral tissue expander insertion with anterior ADM coverage and less than 24 hours of antibiotic prophylaxis is safe and compares favorably to sub-pectoral tissue expander placement with an inferior ADM sling and a prolonged course of antibiotics.

The Impact of Delaying Breast Reconstruction on Patient Expectations and Health Related Quality of Life: An Analysis Using the Breast-Q

Presenter: Alexander Morzycki, MSc

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BACKGROUND: An understanding of patient expectations predicts better health outcomes following breast reconstruction. No study to date has examined how patient expectations for breast reconstruction and pre-operative health-related quality of life vary with time since breast cancer diagnosis.

METHODS: Women consulting for breast reconstruction to a single surgeon’s practice over a thirteen-month period were enrolled in this cross-sectional study. Patients were asked to prospectively complete the BREAST-Q expectations and pre-operative reconstruction modules. A retrospective chart review then performed on eligible patients, and patient demographics, cancer-related factors, and co-morbidities, were collected. Scores were transformed using the Rasch method. Multivariate linear regression models were constructed to assess the association between BREAST-Q scores and time since diagnosis.

RESULTS: Sixty-five patients met inclusion criteria for analysis and are characterized by a mean age of 53±11 (33–79) and a mean BMI of 28±6 (19–49). Most patients were treated by mastectomy (58%), or lumpectomy (23%). At the time of retrospective review, 29 patients (43%) had undergone reconstruction, most of which were delayed (59%). The mean latency from diagnosis to reconstruction was 685±867 days (range: 28–3322 days). Latency from diagnosis to reconstruction was associated with greater expectation of pain (β=0.5; SE=.005; 95% CI: 0.003 – 0.027; p<0.05), and slower expectation for recovery (β= -0.5; SE=.004; 95% CI: -0.021 – -0.001; p<0.05). Latency from diagnosis to reconstruction was associated with increased pre-operative psychosocial wellbeing (β =-0.578;SE 0.009; CI: 0.002 –0.046; p<0.05).

CONCLUSION: Delaying breast reconstruction may negatively impact patient expectations of post-operative pain and recovery. Educational interventions aimed at understanding and managing patient expectations in the pre-operative period may improve health-related quality of life and patient-related outcomes following initial breast cancer surgery.

Persistent Animation Deformity in the Denervated Latissimus Dorsi Pedicled Flap

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