rapidly infiltrated with host tissue, it is relatively resistant to infection and is non-seromagenic. Given these appealing characteristics, we have used this mesh in the onlay position, making the placement of the mesh much more efficient. We reviewed our experience using P4HB mesh in CAWR as an onlay in the setting of bilateral component separation.

METHODS: All patients (n=101) undergoing CAWR between June 2014 and March 2017 at two major university hospitals were followed prospectively. In all cases, surgical repair involved bilateral components separation with elevation of the external oblique laterally to the origin of its segmental vascular supply, followed by primary fascial repair at the midline and P4HB mesh onlay secured to the released lateral edges of the external oblique fascia. Patients were followed up to 38 months.

RESULTS: 101 patients (106 cases; 50 male, 51 female; mean age 59 years, range 22–84) underwent CAWR. Mean BMI was 29 (range 16–48). 56(55%) patients underwent prior repair with an average of 3.5 prior abdominal operations (range 0–12, median 3). 67(66%) patients had at least 2 major medical comorbidities and 77(76%) patients were ASA 3 or greater. 16(15%) were contaminated or infected prior to repair. Average follow up was 15.6 months (range 1–38). 9(8%) patients developed a recurrence at an average of 10.1 months (range 2–18), all of which were appreciably smaller than the original defect. Of the 9 recurrences, 5 were located superiorly and 2 inferiorly to prior mesh placement, 1 in a prior stoma site and 1 in the epigastric midline. 5(5%) patients developed infections treated with antibiotics alone and 6(6%) developed seromas requiring aspiration in the office. Mesh exposure occurred in 8(8%) patients and was treated with local wound care alone in 5 cases. Three patients required operative debridement and re-closure of chronic non-healing wounds; two were found to have retained packing material.

CONCLUSIONS: These data demonstrate an effective, reproducible technique across 2 institutions using a biosynthetic onlay mesh for CAWR with very low rates of hernia recurrence, seroma and other common complications. Notably, no patient developed mesh infection or required mesh excision, even when used in a contaminated surgical field. Although longer follow up is needed, we believe P4HB mesh used as an onlay is a viable option for complex abdominal wall reconstruction.

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Delayed DIEP Flap Loss: A Complication of Microsurgical Advancement and Earlier Discharge

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PURPOSE: The deep inferior epigastric perforator (DIEP) flap has become the preferred option for autologous breast reconstruction. Total flap loss can be a devastating morbidity that results in reoperation, increased cost of care, and decreased patient satisfaction. Traditional teaching is that microvascular complications are most likely to occur in the early post-operative period, typically within 48 hours. The purpose of this study was to investigate DIEP total flap loss at our institution. We hypothesized that most of our institution’s flap losses occurred in early post-operative period.

METHODS: A retrospective analysis of patients who underwent DIEP flap breast reconstruction at a single academic institution between January 2015 and July 2017 was performed. Three reconstructive microsurgeons performed all procedures. Pre-operative demographic data including oncologic history and post-operative complications were recorded. Delayed flap loss was defined as non-salvageable flap presenting greater than 48 hours after surgery.

RESULTS: Eighty-eight patients underwent 137 DIEP flaps for breast reconstruction during the study time-period. Five flaps (3.6%) had threatened flaps due to venous congestion in the first 48 hours post-operatively and three of these were salvaged with emergent operative intervention and anastomotic revision. Five patients suffered total flap loss (3.6%). Sixty percent (3/5) of flap losses occurred after patient discharge (5–6 days post-operatively), with all three patients returning the day after discharge with a non-salvageable flap. All three delayed flap losses were on the left side in patients who underwent bilateral DIEP reconstruction. When patients with early microvascular complications were compared to the delayed flap loss group, there were no significant differences in age, BMI, smoking status,
diagnosis of diabetes or hypertension, radiation, or timing of reconstruction (all p>0.05).

CONCLUSION: Over half of our institution’s flap losses occurred after patient discharge, greater than 48 hours post-operatively. This finding contradicts the notion that the vast majority of flap losses happen in the immediate post-operative period, most commonly as a result of vascular compromise. The advancement of microsurgical techniques is reducing the frequency of flap loss during this early period, when flaps are closely monitored and prompt revision is possible. We did not identify any specific risk factors for delayed flap loss, though all were left-sided reconstructions. More studies are needed to elucidate the etiology of late flap losses. With greater emphasis on early patient discharge, perhaps more detailed patient education on return precautions is indicated to increase flap salvage rate in this group of patients.

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Neo-adjuvant chemotherapy is associated with a lower risk of complications in patients undergoing autologous breast reconstruction. Neo-adjuvant chemotherapy is safe in women electing mastectomy with immediate autologous flap reconstruction despite lower pre-operative lab values.

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PURPOSE: Neoadjuvant systemic approaches to breast cancer are increasingly being used for operable disease. Since surgery is generally performed at 2–4 weeks post completion of systemic therapy, the neutropenic window may not be completely overcome, resulting in the risk for increased complications. The purpose of this study is to evaluate the effect of neoadjuvant chemotherapy on post-operative complications in patients undergoing mastectomy with autologous flap reconstruction.

METHODS: All patients undergoing a mastectomy with immediate abdominal flap reconstruction from 2006 - 2016 were identified using the ACS NSQIP database. Demographics, clinical characteristics, lab values and post-operative complications were extracted from the database. Both univariate and multivariate analysis were used to compare complication rates between the neoadjuvant and non-neoadjuvant population.

RESULTS: 1,833 patients were identified as having as mastectomy with immediate abdominal flap reconstruction. Of those, 89 patients received neoadjuvant chemotherapy (NAC). The NAC cohort were more likely to be younger and have a lower pre-operative WBC, platelet and hematocrit. Multivariate analyses showed that the use of NAC was not associated with higher odds of returning to the OR [AOR (95% CI): 0.5 (0.3, 3.0)], surgical site infections [1.6 (0.7, 3.2)], need for transfusion [1.2 (0.2, 4.5)], wound dehiscence [1.6 (0.3, 6.1)] or development of serious complications [1.3 (0.1, 6.8)].

CONCLUSION: Neo-adjuvant chemotherapy is safe in women electing mastectomy with immediate autologous flap reconstruction despite lower pre-operative lab values.

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Blepharophimosis Ptosis Epicanthus Inversus Syndrome Caused by a ZC3H13 Gene Mutation

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PURPOSE: Blepharophimosis Ptosis Epicanthus Inversus Syndrome (BPES) is a rare craniofacial autosomal dominant disorder characterized by severe bilateral ptosis, telecanthus, epicanthus inversus, delpharophimosis and orbital dysmorphology. BPES type 1 is accompanied by ovarian...