reduction (SPAIR) mammoplasty. This technique utilizes an inferior pedicle, circumvertical skin resection pattern, and purse-string peri-areolar closure to achieve a stable and aesthetic breast shape. Late breast distortion from seroma formation is rare complication than may occur after an initially satisfactory result. Contraction of the seroma cavity may cause the surrounding breast tissues to deform. The purpose of this case series is to describe the treatment of this unique complication after SPAIR mammoplasty.

METHODS: The senior author’s database was retrospectively reviewed to identify all cases with late breast shape distortion after SPAIR mammoplasty. Patients treated operatively and non-operatively were statistically compared. Furthermore, a literature search was conducted to identify any further studies reporting this similar complication.

RESULTS: Over an 18 year period, 747 SPAIR mammoplasty procedures were performed. Late breast distortion from seroma contracture was identified in 16 patients (2.1%). In seven of these patients (12 breasts), the distortion resolved with non-operative management. In nine patients (17 breasts), persistent shape distortion prompted operative exploration and excision of the seroma cavity. In the operative group, eight patients experienced complete resolution of symptoms, while one patient experienced a mild recurrence and declined further treatment.

CONCLUSION: Late breast distortion due to a contracted seroma cavity after SPAIR mammoplasty is a previously unrecognized complication. Persistent shape alterations may require excision of the seroma cavity. Proper management of this complication allows restoration of an aesthetic breast shape.

34.

THE PEDICLED SUPERIOR GLUTEAL ARTERY PERFORATOR FLAP FOR COVERAGE OF SACRAL PRESSURE ULCERS - CLINICAL REVIEW AND TECHNICAL CONSIDERATIONS

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PURPOSE: Perforator-based fasciocutaneous flap reconstruction has become increasingly utilized for coverage of locoregional defects. We present our experience with the pedicled superior gluteal artery perforator flap (SGAP flap) for sacral ulcer reconstruction. We also review technical and anatomic concepts for its design and use.

METHODS: A retrospective review of patients who underwent flap coverage of sacral pressure ulcers at a single institution over a 6-year period. Patient demographic data, operative characteristics and flap outcomes were collected. Relevant comparisons between the SGAP flap and alternate gluteal-based flap reconstructions were made.

RESULTS: Of 83 gluteal-based flaps performed during the study period, 12 were SGAP flaps. Rates of perioperative complications in the series of SGAP flaps, including minor suture line dehiscence (41.6 percent), hematoma (<1 percent), infection (zero), and same-site site recurrence (16.6 percent), were consistent with, or lower than those of all alternate gluteal flap types (41.7 percent, 9.7 percent, 12.5 percent, and 23.6 percent respectively). All 12 SGAP flaps in our series were ultimately successful in providing sacral ulcer coverage and healing.

CONCLUSION: The pedicled SGAP flap is a safe, reliable option for reconstruction of sacral pressure ulcer defects. It embodies the key principles of pressure ulcer reconstruction in that it is simply designed, reliable, reusable, and minimizes donor site morbidity. The SGAP flap should be included in the current surgeon’s armamentarium of flaps for sacral ulcer reconstruction.

35.

NEGATIVE PRESSURE DRESSINGS OVER FREE MUSCLE FLAPS: A 6-YEAR EXPERIENCE

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PURPOSE: Negative pressure dressings (NPDs) make excellent skin graft bolsters that improve graft healing and ease of care. However, some microsurgeons are reluctant to use them
over free flaps for fear of impairing flap perfusion and/or assessment. In 2011 we described the use of NPDs over skin grafted free muscle flaps in 13 cases, showing favorable results.

METHODS: We performed a retrospective review of these cases performed at 2 institutions over a 6 year period.

RESULTS: The majority of flaps were for lower extremity trauma wounds (74), followed by upper extremity trauma wounds (8), scalp tumor defects (4), and one torso wound. There were 7 flap losses, but of these, 4 were due to non-compliance with postoperative immobilization/elevation orders; excluding these 4 failures for which the NPD was clearly not a factor, the flap success rate was 96.4%. Skin graft healing was uniformly excellent, with the exception of the above 7 cases, as well as 2 graft losses due to disruption during flap takeback, 2 partial graft losses due to infection, and 1 partial graft loss due to hematoma. In only one case (a scalp flap), the NPD was discontinued early, on postoperative day 1, due to inability to maintain a seal.

CONCLUSION: This series strongly suggests that NPDs do not contribute to free flap failure. While we do believe there are important technical caveats to NPD placement over free flaps, we feel that NPDs are safe, effective, and in many ways advantageous in this setting.

36.

COST ANALYSIS OF TWO STAGED IMPLANTS WITH ALLODERM AND DEEP INFERIOR EPIGASTRIC PERFORATOR FLAP AUTOLOGOUS RECONSTRUCTION

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PURPOSE: Two staged tissue expander-implant reconstruction with acellular matrix (TE/I+ADM) and deep inferior epigastric perforator flaps (DIEP) are the most common implant and autologous methods of reconstruction in the U.S. respectively. Implant based techniques are disproportionately more popular, partially due to their presumed cost effectiveness.

METHODS: We performed a comprehensive cost-utility analysis to compare (TE/I+ADM) and (DIEP). Medicare reimbursement costs for each procedure and their associated complications were calculated. Pooled probabilities of complications including cellulitis, seroma, skin necrosis, implant removal, flap loss, partial flap loss, and fat necrosis, were calculated using studies from 2010–2016.

RESULTS: The average cost for a successful TE/I+ADM and DIEP were $13,680.75 and $10,237.13 respectively. Incorporating pooled complication data from the published literature, an excess cost of $14,348.2 for TE/I+ADM and $11,395 for DIEP reconstruction was calculated. The expected costs for a successful TE/I+ADM and DIEP reconstruction were $9,974.63 and $7,395.30, significantly lower than the actual costs.

CONCLUSION: When comparing TE/I+ADM to DIEP flap reconstruction, DIEP flaps are more cost effective both at baseline and when factoring pooled complications and secondary procedures. These findings can be used to develop a decision analysis model when providing care to patients.

37.

PEDIATRIC ORBITAL FLOOR FRACTURES: CLINICAL AND RADIOLOGICAL PREDICTORS OF TISSUE ENTRAPMENT AND THE EFFECT OF OPERATIVE TIMING ON OCULAR OUTCOMES

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PURPOSE: To determine the clinical and radiological predictors of tissue entrapment in pediatric orbital floor fractures and to explore the effect of operative timing on ocular outcomes.

METHODS: We retrospectively reviewed the medical records of pediatric patients (aged <18 years) who acutely