Comparison of Perineal Closure Techniques after Extended Abdominoperineal Resections for Anal Cancer
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INTRODUCTION: Recurrent or persistent disease in anal cancer (AC) will often require an extended abdominoperineal resection (APR), which might necessitate pelvic reconstruction. Closure techniques have not been compared for AC in a national database. Therefore, we sought to explore their association to morbidity.

METHODS: The NSQIP database was queried from 2016 through 2019. The cohort was determined using codes corresponding to APRs for AC stratified by primary closure (PC), pedicled omental flap with primary closure, abdominal myocutaneous (AMF), and lower extremity myocutaneous flap. Multivariate regression models were performed for wound or major complication with closure techniques and key covariates as the independent variables.

RESULTS: Of the 569 patients with AC who underwent APR, 381 (67%) had PC, 142 (25%) had AMF, 30 (5%) had pedicled omental flap with primary closure, and 16 (3%) had lower extremity myocutaneous flap. Overall major and wound complication rates were 27% and 8%, respectively. AMF was more commonly used in Black and Hispanic patients (p = 0.03) and also showed a higher probability for morbidity (p < 0.001). However, patients with AMF had higher rates of hypoalbuminemia (p = 0.01). Patients with AMF and lower extremity myocutaneous flap presented with lower hematocrit levels (p = 0.02) and had higher rates of multiorgan resection (p < 0.001). In multivariate analysis controlling for demographics, multiorgan resection, and hypoalbuminemia, the complication risk after AMF was not increased compared with other techniques (NS).

CONCLUSION: Flap closure techniques are favored for perineal closure after APR for advanced disease. This study demonstrates myocutaneous and omental flaps have similar morbidity rates as other closures, when considering crucial patient characteristics.

Cost-Effectiveness of Erenumab and Surgical Trigger Site Deactivation in the Treatment of Migraine Headaches: A Systematic Review
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INTRODUCTION: Migraine headache is a common, debilitating condition responsible for astronomical societal burden. The chronicity of migraine headaches necessitates the use of many healthcare services. Preventative treatment remains the desirable option for this patient population. Pharmacologic advances have led to the development of erenumab, a monoclonal antibody calcitonin gene-related peptide receptor antagonist that directly interferes with the known biochemical pathway of migraine initiation. Alternatively, surgical decompression of migraine trigger sites is a historically effective preventative option for certain patients experiencing migraine headaches. As new treatments emerge, the large economic burden of migraine headaches require cost evaluation against already available preventative modalities.

METHODS: Studies evaluating the cost-effectiveness of both erenumab and surgical trigger site deactivation were found using EMBASE and MedLine. Relevant economic data were extracted from this literature and the cost of treatment with erenumab was compared with surgical decompression.

RESULTS: The market price of erenumab is $6,900/year. Speculative models predicted a direct annual healthcare cost ranging from $11,404 to $12,988 for patients experiencing episodic migraine. For patients with chronic migraine, this range extended to $25,604. Annual indirect costs ranged from $7,601 to $19,377. Prospective and model-based studies evaluating surgical trigger site deactivation reported an average one time surgical cost between $6,956 and $10,303. In episodic migraine, subsequent annual healthcare costs were $900.

CONCLUSION: Erenumab has potential to be a revolutionary noninvasive preventative treatment for migraine headache. With that said, the cost-conscious option for patients receiving more than 1 year of treatment remains surgical trigger site deactivation.

Effect of Androgen Therapy on Transgender Female-to-Male Mastectomies
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INTRODUCTION: One to 1.4 million individuals in the US identify as transgender. In the female-to-male transgender population, testosterone therapy is used in commonly gender transition. To date, the effects of exogenous androgens on breast tissue are poorly understood. In this study, we investigated the histopathologic findings in gender-affirming mastectomy and the effects of exogenous androgens on estrogen receptors and androgen receptors.

METHODS: The objective was to compare androgen-exposed breast tissue with normal breast tissue. Breast specimen was obtained from patients who underwent gender-affirming mastectomy, each with recorded exogenous androgen exposure. Control breast specimens were obtained from breast reduction procedures, aged matched to the gender-affirming mastectomy cohort, all without androgen exposure. The gross histologic findings and microscopic findings were measured. In addition, immunohistochemistry for androgen receptors and estrogen receptors was performed.

RESULTS: The androgen-exposed breast tissue revealed dense fibrotic stroma, lobular atrophy, thickened lobular basement membranes, and gynecomastoid changes. The longer the androgen exposure, the more profound the effect. The incidence of atypia or cancer was much lower than expected. Estrogen receptor and androgen receptor expression was noted to be increased in breast tissue specimen, with the longest exogenous androgen exposure (Fig.).

CONCLUSION: Increased androgen exposure is associated with lobular atrophy and gynecomastoid changes in breast parenchyma. Estrogen receptors and androgen receptors are expressed more strongly in lobular epithelium in patients with prolonged androgen exposure. Additional studies are needed to investigate the mechanism responsible for these changes at a cellular level.

Figure

Effect of Language Barriers and Need for Interpreter Services on Breast Reduction Mammoplasty Outcomes
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INTRODUCTION: Breast reduction mammoplasties (BRMs) are routine ambulatory procedures for patients with symptomatic macromastia that require extensive and nuanced preoperative and postoperative counseling. For patients with limited English proficiency, professional interpreters are the gold standard for communication, although their impact on patient outcomes is unknown.

METHODS: There were 1,206 consecutive patients with BRMs analyzed retrospectively at a single center during a 5-year period from 2015 to 2019, with 1,023 patients included in our final analysis. Patients were split based on median number of postoperative office visits and the impact of various factors were analyzed including age, BMI, comorbidities, and interpreter use.

RESULTS: Patients with 3 or fewer postoperative visits were significantly younger than patients with 3 or more visits (median age 32 years; interquartile range 24 to 46 years vs 41 years; interquartile range 27 to 53 years; \( p < 0.001 \)), had significantly lower BMI (31.2 ± 4.6 kg/m² vs 32.4 ± 4.8 kg/m²; \( p < 0.001 \)), and decreased complications rate (12.4% vs 41.3%; \( p < 0.001 \)). Interpreter use did not significantly differ between patients with 3 or fewer postoperative office visits and those with more than 3 office visits (20.0% vs 22.4%; \( p = 0.35 \)). On regression analysis, interpreter use was not significantly associated with number of postoperative office visits within 3 months of operation (\( \beta = 0.029; 95\% CI, -0.033 \) to \( 0.090; p = 0.37 \)).

CONCLUSION: The use of professional interpreters for patients with limited English proficiency undergoing BRMs had no significant impact on the number of postoperative clinic visits, emergency department visits, and complications. Age, BMI, smoking status, and specific comorbidities, such as diabetes, were more important in determining outcomes for patients with limited English proficiency undergoing BRMs.

Examining Reconstructive Strategies for Complex Cranial Defects
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INTRODUCTION: Scalp and calvarial defects in patients can result from a number of causes, including trauma, burns, tumor resections, infections, osteoradionecrosis, or congenital lesions. Our objective was to evaluate alloplastic and autologous reconstruction for high-risk cranial defects.

METHODS: A retrospective review of patients who underwent cranioplasty of a hostile site at a Southeastern tertiary referral center between January 2008 and December 2018 was performed. The patients were stratified into 3 groups based on the type of implant used: autogenous (bone), alloplastic (polylactid acid, titanium, or polymethylmethacrylate), or mixed.