lastling surgical site pain relief when compared with traditional local anesthetics, but evaluation of efficacy in treating STSG donor sites has been limited. The goal of this investigator initiated randomized, controlled clinical trial is to evaluate the effect of liposomal bupivacaine compared with standard of care on donor site pain and opioid consumption.

MATERIALS AND METHODS: A parallel, randomized, single-center controlled trial of adult acute burn patients with <20% total body surface area burns was conducted to evaluate the efficacy of liposomal bupivacaine at STSG donor sites. Patients were blinded to group allocation. The control group received standard subcutaneous infiltration of dilute lidocaine solution at the STSG donor site, and the experimental group received dilute liposomal bupivacaine infiltration in a similar fashion. Preoperative pain scores and opioid consumption were evaluated. Donor site scores were assessed at regular intervals for 72 hours postoperatively. Opioid consumption was totaled in morphine equivalents for 24, 48, and 72 hours postoperatively. Sample size was determined by power analysis. Categorical variables were summarized with percentages, and continuous variables were summarized by means and medians. Chi-square test was used for testing associations between categorical variables. T-Test was used to compare means across groups, using ANCOVA to control for preoperative variables when appropriate.

RESULTS: A total of 25 patients were enrolled in each group, and 80% of each group were male (n = 20, P = 1.0). Average age was 49.2 (SD 15.9) in the control group and 47.0 (SD17.4) in the experimental group (P = 0.67). In the control group, 72% (n = 18) of patients were white and 20% (n = 5) were black compared with 76% (n = 19) and 12% (n = 3), respectively, in the experimental group (P = 0.55). Average total body surface area burns was 4.0% in both groups (P = 0.94). All donor sites were on the thigh and a standard dressing was used. There were no statistical differences in pain scores at any time point postoperatively (mean control range 3.1/10–4.9/10, experimental range 3.3/10–4.3/10, P = 0.12–0.96). There were no statistical differences in opioid consumption at 24, 48, or 72 hours postoperatively between the groups (mean control range 3.1/10–4.9/10, experimental range 49.3–71.1, morphine equivalents range 63.6–75.8, P = 0.34–0.85). The average length of stay was 7.7 days in both groups (P = 0.88). No adverse events occurred in either group.

CONCLUSIONS: There is no statistical benefit to the use of liposomal bupivacaine for infiltration at STSG donor sites compared with standard of care with respect to pain control, opioid use, or length of stay when evaluated in a randomized, controlled fashion. Although the product appears safe and equivalent to lidocaine in management of STSG donor sites, the additional cost associated with liposomal bupivacaine does not warrant its use in this setting.

Law of Diminishing Returns in Ventral Hernia Repair: Fact or Fiction?

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BACKGROUND: Repeat ventral hernia repair (VHR) is associated with increased risk of complications and recurrence. Due to disruption of tissue planes, increasingly dense adhesions, and previously implanted mesh, optimal repair of recurrent ventral hernias often requires plastic surgeons to perform advanced techniques, like component separation, to achieve optimal repair. Here, we present the first study looking at how repeat VHR affects quality-of-life (QoL), and if there is a relationship between the number of prior repairs and QoL improvement after surgery.

METHODS: A retrospective chart review was conducted of patients undergoing VHR between August 2017 and August 2019, who completed at least one preoperative and postoperative Abdominal Hernia-Q and had at least 3 months of clinical follow-up. Patient data, including demographics, operative information, postoperative outcomes, total cost of care, and QoL scores after repair, were collected. Patients were split into four cohorts based on the number of prior repairs (0, 1, 2, 3+). Categorical data were compared using χ², and continuous data were analyzed using Kruskal Wallis tests.

RESULTS: A total of 93 patients met inclusion criteria, with 19 (20%), 45 (48%), 15 (16%), and 14 (15%) patients in each cohort, ranging from 0 to 3+ prior repairs. Patients with more prior repairs tended to have more complications and higher recurrence, but this did not reach significance. However, patients with more prior repairs were significantly more likely to be re-admitted and undergo re-operation (P = 0.04, P = 0.01, respectively). Related to this, patients...
with more prior repairs had significantly higher hospital costs when compared with patients with one or no prior repairs ($P = 0.004$). Patients with 3+ prior repairs had significantly lower pre-operative overall and physical QoL when compared with patients with two or fewer prior repairs ($P = 0.04$, $P = 0.03$, respectively). Additionally, patients with 3+ prior repairs demonstrated significantly higher improvements in physical QoL when compared with the other cohorts ($P = 0.03$). Importantly, all patients reported a similar absolute level of QoL postoperatively, irrespective of prior repairs ($P = 0.34$).

**CONCLUSIONS:** Repeat ventral hernia repair remains a challenge for plastic surgeons, as they are associated with increased complications, recurrence, readmission, and reoperation. We found that patients with multiple repeat VHRs (3+) present with significantly lower QoL than patients with fewer prior repairs. Despite this, all patients show significant improvements in QoL after VHR, regardless of number of prior repairs. Furthermore, patients with multiple prior repairs achieve similar postoperative QoL compared with patients with fewer or no prior repairs. This information helps surgeons preoperatively weigh the risks and benefits of operating on recurrent VHs. While the authors encourage patients to optimize their health and modifiable risk factors prior to repair, we offer repair in appropriate clinical situations to patients who have had multiple recurrences, as the QoL benefits are still robust.

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**ICG-fluorescence Lymphographic Findings following Immediate Lymphatic Reconstruction in the Axilla**

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**PURPOSE:** Immediate lymphatic reconstruction (ILR), performed at the time of axillary lymph node dissection, has demonstrated promising reductions in the development of breast cancer associated lymphedema. However, questions persist regarding the effects of adjuvant therapies, particularly postmastectomy radiation therapy, on the continued patency of the lymphaticovenous anastomosis. ICG lymphography is a tool commonly used to visualize the morphology and transit of lymphatic vessels in surgery and could be used to assess changes in lymphatic function in patients who have undergone ILR. The aim of our study was to assess lymphographic outcomes, including ICG pattern and LVB patency, following axillary ILR in patients at high risk for breast-cancer-associated lymphedema.

**METHODS:** Baseline ICG studies of 15 patients who underwent ILR were compared with repeat studies obtained during secondary stage breast reconstructive procedures. Changes in lymphatic transit and lymphographic morphologic patterns from baseline were noted and compared with current lymphedema status for each patient in order to determine the efficacy of repeat ICG lymphography in visualizing lymphedema. Transit of the ICG dye into the axilla in repeat lymphographic studies was also noted to assess continued L VB patency.

**RESULTS:** All 15 patients in this study demonstrated linear lymphatic flow in intra-operative lymphography studies performed during initial lymphatic reconstruction. An average of 2.4 (range 1–4) L VBs were performed per patient. Only 1 patient in this study group had preservation of incontinuity lymphatics at the time of axillary lymph node dissection. Repeat lymphographic studies showed clear, linear lymphatic transit in 12 of 15 patients. Of these 12 patients, an average of 2.5 L VBs were performed, 10 received chemotherapy (seven neoadjuvant, three adjuvant), and all 12 received postmastectomy radiation therapy. Dermal backflow patterns of varying severity were recorded in three of 15 patients, two of whom showed signs of lymphedema prior to their repeat study and the last went on to develop clinically detectable lymphedema. Of these three patients, an average of two L VBs were performed, all received chemotherapy (two neoadjuvant, one adjuvant) and two of the three underwent postmastectomy radiation therapy. Of the 12 patients who remain lymphedema-free, seven studies demonstrated clear visualization of linear ICG flow from the lymphatics of the arm into the axilla without evidence of lymphatic collateralization. An average of three L VBs were performed in this group and all of these patients received adjuvant radiation.

**CONCLUSIONS:** We have demonstrated that ICG lymphography can be implemented as a postoperative tool to assess lymphatic function in patients who have undergone ILR in the axilla. Repeat ICG imaging studies in the