

## TissuGlu® Surgical Adhesive is an effective alternative to drains for fluid management in abdominoplasty.

The use of post-surgical drains to manage the risk of fluid-related complications after abdominoplasty leads to significant patient discomfort and delay in return to normal activities.

Alternatives to drains such as progressive tension sutures which reduce the dead space between tissue layers can be effective, but add significantly to OR time and can lead to cosmetic dimpling. TissuGlu Surgical Adhesive may provide an alternative for flap fixation that could eliminate the need for post-surgical drains, reducing the frequency of post-surgical invasive treatments and improving the patient's time to full recovery.

**Methods:** We performed a prospective, randomized non-inferiority trial to evaluate the safety and effectiveness of using TissuGlu Surgical Adhesive as an alternative to post-surgical drains for management of the risk of fluid-related complications in abdominoplasty procedures. The study compared abdominoplasty patients receiving standard wound closure plus two post-surgical drains (SWC+drains) with patients receiving TissuGlu Surgical Adhesive and no drains (SWC+TissuGlu). The primary outcome measure was number of post-operative invasive treatments, which included both drain removals and needle aspirations. It was hypothesized that the elimination of dead space in the SWC+TissuGlu group would improve wound healing, and that the number of post-operative invasive treatments related to aspirations in the test group would not be inferior to the management and removal of drains and aspirations in the control group.

**Results:** The SWC+drains group (n=52) had an average of 2.2 invasive treatments per patient, whereas the SWC+TissuGlu group (n=51) had an average of 0.2 invasive treatments per patient (non-inferiority  $p < 0.001$ , superiority  $p < 0.001$ ). TissuGlu patients had significantly less cumulative fluid volume (97mL versus 411mL in the control group) and fewer cumulative days of treatment

(1.6 versus 7.3 in the control group). Patients receiving TissuGlu also resumed normal activities such as showering, walking up stairs and returning to work sooner than control patients.

Conclusion: Patients receiving TissuGlu instead of drains underwent significantly fewer post-operative invasive treatments and experienced a faster return to normal activities. The positive outcomes support the use of the adhesive as a device to help eliminate the deadspace and improve wound healing in large flap procedures. The results of the study demonstrate that TissuGlu Surgical Adhesive is a safe and effective alternative to drains in abdominoplasty patients.