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MANUFACTURING DISCLOSURE: Apyx Medical manufactures and owns the Renuvion technology discussed in this article.

INDICATIONS FOR USE & INTENDED USE DISCLOSURES

- The Renuvion® Dermal System is an electrosurgical device for dermatological procedures for the treatment of moderate to severe wrinkles and rhytides, limited to patients with Fitzpatrick skin types I, II or III. The treatment is achieved through controlled heating of the outer layers of the skin so that part or all of the epidermis becomes non-viable and there is controlled thermal modification to the underlying dermis.
- The dermal resurfacing settings for Renuvion referred to in the literature have not been cleared or approved by the FDA. Please be aware that the scientific discussion in the literature goes beyond the label approved for dermal (full face) resurfacing. Apyx Medical does not suggest such use, but rather wants to present to you with current scientific discourse. Such use may not be safe or effective.

RISKS:

- Risks associated with the use of the Renuvion Dermal System include but are not limited to hypertrophic scarring, milia/acne, telangiectasia (spider veins), skin discoloration/ hypopigmentation, dormant infection reactivation, infection, bruising or bleeding. Warning: Application of more than one treatment pass in the perioral area, on the forehead, and along the jawline has been associated with hypertrophic scarring.

As with any procedure, individual results may vary. As with all energy devices there are inherent risks associated with its use, refer to the IFU for further information.

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INTRODUCTION: One of the more common and disruptive complications of gender-affirming vaginoplasty is postoperative bleeding, typically presenting as a hematoma or hemorrhage. These complications often require readmission and reoperation. Interventions targeted at reducing the risk of postoperative bleeding include the use of hemostatic agents, such as intravenous tranexamic acid (IV-TXA), which has been found in multiple surgical disciplines to have some effect on postoperative bleeding events. The present study aims to evaluate the impact of intraoperative IV-TXA administration on postoperative bleeding events in a large sample of gender-affirming vaginoplasty patients.

METHODS: Following approval from the Institutional Review Board at the Icahn School of Medicine, patients receiving gender-affirming vaginoplasty at the Mount Sinai Center for Transgender Medicine and Surgery between January 2018 and December 2021 were evaluated retrospectively. Demographics, comorbidities, intraoperative details, and postoperative outcomes were collected. Intraoperative details included hemostatic agents, estimated blood loss, anticoagulation, operative time, transfusion, and intraoperative complications. Preoperative and postoperative hemoglobin levels were also collected. Postoperative complications included minor hematomas, defined as hematomas requiring conservative treatment; major hematomas, defined as hematomas requiring intervention such as return to the operating room and readmission; postoperative hemorrhage; and readmission and reoperation related to bleeding. Non-plastic surgery patients, patients who did not receive heparin anticoagulation, and patients with bleeding disorders were excluded. Pearson's Chi Square and Fischer's Exact tests were used for categorical variables, and analysis of variance was used for continuous variables. Statistical significance was set at $p<0.05$.

RESULTS: Three-hundred-forty-two (342) patients were included in the study, 189 of whom did not receive IV-TXA and 153 of whom received IV-TXA. Mean follow up time was 9.5 months. Surgeon preference alone dictated IV-TXA use. All patients received some form of local hemostatic agent, including topical thrombin and Gelfoam. Significantly fewer patients in the IV-TXA group had a minor hematoma (13.2% vs. 0.6%, $p<0.001$). Estimated blood loss was significantly less in the IV-TXA group (121±51 mL vs. 172±77 mL, $p<0.001$). Postoperative hemoglobin was higher in the IV-TXA group (10.5±2.3 g/dL vs. 9.75±1.6 g/dL, $p=0.05$). Major hematomas (3% vs. 2.6%, $p=0.511$), postoperative hemorrhage (7% vs. 4%, $p=0.235$), bleeding requiring reoperation (3.7% vs. 3.2%, $p=0.828$), and bleeding requiring readmission (3.7% vs. 1.9%, $p=0.268$) were not significantly different between the two groups. Venous thromboembolic events were not different between the two groups (0% vs. 1.3%, $p=0.115$). Subgroup analysis of readmissions and reoperations for major hematomas or postoperative hemorrhage in each group did not achieve statistical significance, although readmissions for major hematomas were 50% less in the IV-TXA cohort.

CONCLUSIONS: The use of IV-TXA significantly reduces minor hematomas in patients receiving gender-affirming vaginoplasty, a complication that causes patient distress and pain in the postoperative period. IV-TXA is also useful in decreasing blood loss, and does not significantly impact the rate of venous thromboembolic events, a feared complication of IV-TXA use. Despite no statistically significant difference in major bleeding events, the trend towards fewer readmissions for major hematomas in the IV-TXA cohort may suggest this intervention is worthwhile in preventing serious postoperative bleeding complications.

Take Your Facelifts to the Next Level: Safety and Efficacy of PLASMA Resurfacing with Face and Necklifts

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GOALS/PURPOSE: Deep facial skin resurfacing with radio-frequency (RF) plasma technology started in the early 2010's. When compared to other deep facial resurfacing techniques such as phenol chemical peels or C02 and erbium ablative laser skin resurfacing, plasma resurfacing results in better correction of superficial and deep rhytids, photodamage and more tissue contraction resulting and improved skin and tissue tightening. Performing deep plasma skin resurfacing at the same time as the rhytidectomy procedure offers the patient improved facial rejuvenation results in one surgical session and recovery period.

METHODS/TECHNIQUE: A retrospective review of a single surgeon's experience from 2017-current is presented. A total of 90 patients were treated in one session,

combining a face and necklift procedure with fat grafting and full face deep plasma skin resurfacing. Patients ages range from 50-86, with 88 females and 2 males. The procedures were performed under IV sedation (88 patients) and 2 under general anesthesia (2 patients).

Once adequate general or IV sedation was administered, tumescent solution was infiltrated into the face and neck (average volume of 180 cc total). Rhytidectomy techniques performed included SMAS plication, SMAS imbrication or Deep plane techniques (surgeon choice depending on the patient's facial anatomy). A concurrent necklift and platysmaplasty was also performed. Next, full face resurfacing was performed with helium RF plasma in a majority of the patients (80), while nitrogen RF plasma was performed in 8 patients. Settings for the helium RF plasma were at 40% energy at 4 liter flow, single pass on the whole face, a second pass was performed on the chin and peri-oral areas. The energy was decreased to 20% at 4 liter flow on the areas of the rhytidectomy lateral elevated skin flaps. For the 8 patients treated with the nitrogen plasma, energy settings were at 4 kilojoules (kj), single pass, and was lowered to 3 kj over the areas of the lateral elevated skin flaps.

Finally, fat grafting was performed on the face via Coleman's technique. The patients were followed the next day, weekly, then monthly. Longest follow-up is at 7 years post-operative.

RESULTS/COMPLICATIONS: There were three complications. One patient experienced a late onset cellulitis on her forehead at 7 weeks post-operative, and this resolved with a one week course of oral antibiotics. Two patients had small areas of hypertrophic scarring on their chin areas that resolved completely with light C02 resurfacing combined with laser-assisted drug delivery of kenalog 40. There were no incidents of skin necrosis on the areas of the elevated rhytidectomy or necklift skin flaps. Aesthetic results showed very good correction of deep and superficial rhytids, photo damage and much improved overall quality of the skin.

CONCLUSION: This small series over the course of seven years shows the safety and efficacy of performing deep RF plasma resurfacing immediately after rhytidectomy procedures. The elevated skin flap can be treated effectively by lowering the energy settings of the plasma devices. Patients can appreciate a single session surgical procedure that results in comprehensive facial and neck rejuvenation, with less downtime when compared to a staged procedure.

The Impact of Facial Feminization Surgery on Appearance Satisfaction and Gender Dysphoria: A GENDER-Q and GPSQ Study

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PURPOSE: This study investigates facial satisfaction, gender dysphoria and their associated correlation in transgender patients before and after receiving feminizing gender-affirming surgery (FFS).

METHODS: Our institution participates in an international initiative to field-test the GENDER-Q survey, a novel instrument designed to measure the outcomes of gender-affirming care. In conjunction with the GENDER-Q, we utilized the Gender Preoccupation and Stability Questionnaire (GPSQ) to evaluate gender dysphoria. We collected data from patients both preoperatively and at a minimum of 6 months post-operatively. We compared the overall GPSQ score and GENDER-Q item responses using both unpaired and paired t-tests. Furthermore, Spearman's correlation coefficients to assess the relationship between individual GENDER-Q items and GPSQ scores were calculated.

RESULTS: Survey data from 35 transgender patients are included, with 8 patients providing data both pre- and post-operatively, resulting in 29 preoperative and 14 postoperative surveys. The mean follow-up time was 6.5 months (SD=1.5) All patients received FFS procedures in their upper, middle and lower face. The average age of patients was 33.0 years (SD= 8.2).

Unpaired analysis of the Gender Q for overall satisfaction showed significantly higher values post-operatively than pre-operatively for all parts of the face. The highest pre and post-operative difference in mean Likert scores (out of a maximum of 6) was observed for upper face by 2.6 points ($p<0.001$) and the lowest for cheeks by 1.12 ($p=0.02$).