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- Apyx Medical wants to present you with current scientific discourse. Specific usage outside of the cleared indications may not be safe or effective.

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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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Ultrasound-Assisted Rhytidectomy Including Sub-SMAS and Subplatysmal Dissection

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Abstract

Energy-based facelifting techniques are a relatively new genre of surgery. In this approach, the energy-based device—whether laser, radiofrequency plasma, or ultrasound—can be used in the superficial plane to elevate skin flaps before performing more traditional facelift techniques involving the superficial musculoaponeurotic system (SMAS) or platysma. The initial reports of utilizing fiber lasers as surgical tools date back to approximately 2007 and initial lipolasers were used to elevate facial skin flaps. The other energy-based devices were also tested. The author has probably the largest series of energy-based facial rejuvenation procedures, having performed over 3,000 of these procedures. The advantages of laser-assisted rhytidectomy include hemostasis, facilitated dissection in areas hard to elevate conventionally such as nasolabial folds or distal neck and the remodeling and tightening of tissue that results from the activation of the wound healing cascade of neocollagenesis and wound contraction. The author currently has a preference for energy device used during rhytidectomy and it is a high frequency ultrasound energy delivered by a five-ring 2.9- and 3.7-mm probe. The use of the ultrasound dissector in both superficial and deep procedures is highlighted in this article with emphasis on its use for deep cervicoplasty and subplatysmal procedures as well as sub-SMAS elevations of the facial deep plane.

Keywords

- rhytidectomy
- fiber laser
- helium plasma
- ultrasound
- Vaser

Aging baby boomers are a formidable demographic force in the United States with a person turning 60 years old every 10 seconds. Age demographic data in 2017 note that between 30 and 40% of the total U.S. population is over 50 years of age.¹ This represents over 115 million potential patients with skin laxity of the face and neck. Excisional facial surgery such as a rhytidectomy has long been considered the gold standard of facial rejuvenation but recent years have seen the introduction of new technologies and energy-based devices (EBDs) for subdermal skin tightening whether used as a standalone treatment paradigm or used concurrently with rhytidectomy. These technologies and applications will be presented and critiqued in this article and will concentrate on current technologies being used concurrently with rhytidectomy.

Introduction to Thermoplastic Rhytidectomy

Thermoplastic rhytidectomy (TPR) is the use of EBDs subdermally in a manner that complements the rhytidectomy whether it is being used for hemostasis or for subdermal skin tightening. TPR also refers to EBD use in standalone procedures (device only) or when used concurrently with surgical techniques including nonexcisional and full excisional rhytidectomy (hybrid procedures). Thermal fibroliposculpting (TFLS) during the process of TPR is referred to as “sculpturing” which is the result of thermal effects of these devices on adipose tissues and collagen in the subdermal or interstitial space. TFLS or “sculpturing” capabilities when combined with surgery, specifically established rhytidectomy techniques either full or limited, are synergistic in producing long-term results. The term thermoplastic was

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- *The Renuvion APR Handpiece is intended for the coagulation of subcutaneous soft tissues following liposuction for aesthetic body contouring.*
- *The Renuvion APR Handpiece is indicated for use in subcutaneous dermatological and aesthetic procedures to improve the appearance of lax (loose) skin in the neck and submental region.*
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- *The Renuvion APR Handpiece is intended to be used with compatible electro-surgical generators owned by Apyx Medical.*

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