

Advancements In Non-Invasive Skin Tightening Procedures: Combining Dermatologic And Surgical Modalities

Fahim Ullah¹, Muhammad Abbas², Mamuna Ayub³, Irfan Ishaq⁴, Noor Ali⁵, Asadullah Awan⁶, Urinboev Fakhridin⁷

¹ Assistant Professor, Department of Burn and Plastic Surgery Center, Hayatabad, Peshawar, Pakistan.

Email: dr.fahimullahpls@gmail.com

² Associate Professor, Department of Plastic Surgery, University College of Medicine and Dentistry, University of Lahore, Lahore, Pakistan.

³ PGR, Department of Dermatology, Aziz Fatima Hospital, Faisalabad, Pakistan.

⁴ Associate Professor, Department of Plastic Surgery, Avicenna Medical College, Lahore, Pakistan.

⁵ Assistant Professor, Department of Plastic Surgery, Bolan Medical College, Quetta, Pakistan.

⁶ Assistant Professor, Department of Plastic Surgery, Dow International Medical College and Dow University of Health Sciences, Ojha Campus, Karachi, Sindh, Pakistan.

⁷ Department of Public Health and Healthcare Management, Samarkand State Medical University, Samarkand, Uzbekistan.

Corresponding Author:

Fahim Ullah

Email: dr.fahimullahpls@gmail.com

ABSTRACT

Background: Non-invasive skin tightening procedures have become increasingly popular for the management of age-related skin laxity because they provide aesthetic improvement with minimal downtime and reduced procedural risk. **Objective:** To evaluate the efficacy and safety of combined non-invasive skin tightening procedures and identify factors associated with successful treatment outcomes. **Methods:** This retrospective observational study was conducted at Burn and plastic surgery center Hayatabad from April 2024 to April 2025 and included 190 patients who underwent non-invasive skin tightening using single or combination treatment modalities. **Results:** The mean age of patients was 46.7 ± 9.8 years, and 142 (74.7%) were female. Combination therapy was performed in 89 (46.8%) patients, while 101 (53.2%) received single-modality treatment. Significant improvements were observed in GAIS (1.4 ± 0.5 to 3.8 ± 0.7), WSRS (3.6 ± 0.7 to 2.1 ± 0.6), skin elasticity (42.5 ± 8.4 to 61.8 ± 9.6), physician global assessment (2.1 ± 0.6 to 4.0 ± 0.7), and patient satisfaction ($54.6 \pm 13.2\%$ to $86.4 \pm 10.5\%$) (all $p < 0.001$). Overall successful treatment was achieved in 151 (79.5%) patients. **Conclusion:** Combined non-invasive dermatologic and minimally invasive skin tightening modalities provide significant aesthetic improvement with excellent safety and high patient satisfaction. Younger age, lower body mass index, absence of smoking, milder skin laxity, and combination therapy are associated with superior treatment outcomes....

Keywords: Skin tightening; radiofrequency; high-intensity focused ultrasound; platelet-rich plasma; facial rejuvenation..

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INTRODUCTION

The sagging skin is a frequent consequence of intrinsic ageing and environmental factors, which have a profound impact on the appearance of the facial skin, body contour, and self-confidence. Over time, the collagen and elastin fibers break down, causing the skin to sag and wrinkle; the skin's structural integrity is lost, the subcutaneous fat is redistributed, and the fascial integrity weakens. As life expectancy continues to rise and there is an improved focus on skin aesthetics, there has been a significant rise in demand for minimally invasive skin rejuvenation procedures in recent years [2]. Although traditional surgical facelift procedures are still the most effective method of addressing advanced skin laxity, surgery has been known to be more expensive, longer to recover from, can result in scarring, and has risks associated with it. As a result,

numerous patients with mild to moderate skin laxity are looking for non-invasive solutions that offer a worthy cosmetic benefit with minimal downtime and complications [4].

There are several non-invasive skin tightening procedures based on the principle of controlled thermal stimulation of collagen in the dermis or superficial musculoaponeurotic system (SMAS) which results in neocollagenesis, remodeling of elastin, and contraction of the tissue [5]. The modalities used most often are radiofrequency (RF), microfocused ultrasound (MFU), high-intensity focused ultrasound (HIFU), fractional lasers, infrared light therapy, and combined energy-based platforms [6]. These methods trigger over a period of months to remodel the collagen over time to enhance firmness, elasticity, and contour of the skin. Of these modalities, radiofrequency technologies have

become very popular due to their ability to deliver uniform thermal energy to the dermis while maintaining the epidermis [7]. Similarly, HIFU is now an accepted method of facial lifting as the deeper layers such as the SMAS are targeted with focused ultrasound energy to provide a lifting effect similar to SMAS lift surgery in certain patients [8]. In addition, fractionated laser resurfacing can also help enhance the texture, pigmentation, and fine lines of skin because of its ability to cause controlled damage and regeneration of collagen [9].

In recent years, the approach to aesthetics has become more multimodal with the aim of not relying on a single technology. Surgical or energy-based skin tightening procedures may be combined with dermatologic procedures like PRP therapy, microneedling, fractional laser resurfacing, chemical peeling and injectable biostimulatory agents to offer synergistic benefits to skin quality, elasticity and facial contour [10]. These combination treatments aim at several mechanisms of skin ageing and improve the efficacy of the treatment, with a good safety profile. Even getting a good match of patient is a very important factor in a successful skin tightening. Other factors, such as age, skin laxity, BMI, smoking, UV exposure, collagen quality, Fitzpatrick skin type, previous cosmetic treatments, and expectations for treatment are key determinants of treatment efficacy [11]. In people with mild to moderate skin redundancy, non-invasive techniques may provide more satisfactory results, while in people with more severe skin redundancy, it may still be necessary to have skin removed by surgery [12]. Some of the most commonly used validated clinical outcomes measures for non-invasive skin tightening include physician global aesthetic improvement scales, patient satisfaction questionnaires, skin elasticity measures, wrinkle severity scoring, photographic analysis and quality-of-life measures [13]. The majority of studies have shown a marked increase in firmness, contour, reduction of wrinkles and patient satisfaction with relatively low complication rates [14]. Common side effects of the procedure are mild discomfort, temporary numbness, erythema, and edema, and serious side effects are very rare if the procedure is performed correctly [15]. While the combined dermatologic/surgical strategies have become increasingly popular, there is significant disagreement and variation in treatment protocols, device parameters, patient selection criteria, and outcome assessment for combined therapies. Therefore, additional clinical studies are needed to assess the efficacy and safety of combination therapies in various patient populations and indications for aesthetics [16].

Objective

To evaluate the efficacy and safety of combined non-invasive skin tightening procedures and identify factors associated with successful treatment outcomes.

METHODOLOGY

This retrospective observational study was conducted at Burn and plastic surgery center Hayatabad from April 2024 to April 2025 and included 190 patients who underwent

non-invasive skin tightening procedures using dermatologic modalities alone or in combination with minimally invasive surgical techniques. The study aimed to assess the effectiveness, safety, satisfaction, and clinical results of combination skin tightening treatment. Patients were enrolled if they were 30 years or older, had mild-to-moderate skin laxity in the face and/or neck area, and had undergone non-invasive skin tightening procedures, and had at least 6 months of follow-up. Patients who met the inclusion criteria were completely clinically evaluated before the treatment and included in a standardized photographic documentation and had follow-up after the treatment. Patients with severe skin laxity that necessitated conventional facelift surgery, active infection of skin, autoimmune connective tissue disorders, uncontrolled diabetes mellitus, coagulation disorders, pregnancy, history of skin malignancy, cosmetic surgery within six months, incomplete medical records, or inadequate follow-up were excluded.

Data Collection

After approval by the Institutional Ethical Review Committee, patient information was extracted from the electronic medical record, procedural notes, clinical photos and follow-up evaluations with a standardised data collection form. Demographic and clinical characteristics mentioned were age, sex, body mass index, smoking, Fitzpatrick skin type, duration of skin laxity, anatomical treatment area, aesthetic surgeries performed, diabetes mellitus and hypertension, and degree of skin laxity as measured by the Facial Laxity Rating Scale. Treatment-related variables were included such as the type of treatment (radiofrequency, high-frequency focused ultrasound, microfocused ultrasound, fractional laser, microneedling radiofrequency, platelet-rich plasma, or a combination of treatments), number of treatments, intervals between treatments, duration of the treatment, adjunctive minimally invasive surgical procedures (if any), anesthesia used, and peri-procedural complications. The Global Aesthetic Improvement Scale (GAIS), skin elasticity, Wrinkle Severity Rating Scale (WSRS), standardized photographic comparison, patient satisfaction score, and physician global assessment were used to assess clinical outcomes prior to treatment and at 6-month follow-up. The main outcome measure was successful treatment which included moderate-to-excellent improvement on the Global Aesthetic Improvement Scale, at least 80% patient satisfaction, and objective improvements in skin laxity without the need for further corrective procedures. Secondary endpoints were the improvement of wrinkle severity, skin elasticity, facial contour, quality of life, recovery time, adverse events from the procedure, re-procedure rate, and patient satisfaction.

Statistical Analysis

SPSS version 26.0 was used for data analysis. The continuous variables were reported as mean $\pm$ SD, and categorical variables were reported as numbers and percentages. Paired t-tests were used to compare pre- and

Advancements In Non-Invasive Skin Tightening Procedures: Combining Dermatologic And Surgical Modalities

post-treatment clinical scores. Treatment responders and treatment non-responders were compared by independent t-test or Mann–Whitney U test for continuous variables, and by Chi-square for categorical variables. Variables that were significant on univariate analysis were included in a multivariate logistic regression model to determine independent factors associated with successful skin tightening results. Odds ratios (ORs) with 95% confidence intervals (CIs) were computed and p-values of < 0.05 were viewed as significant.

RESULTS

The mean age of patients was 46.7 ± 9.8 years, with females forming the majority (142, 74.7%). Mean BMI was 27.4 ± 4.2 kg/m². Facial skin laxity was more common (126, 66.3%) than neck laxity (64, 33.7%). Moderate laxity was present in 108 (56.8%) patients, while mild laxity was seen in 82 (43.2%). Baseline GAIS and WSRS scores were 1.4 ± 0.5 and 3.6 ± 0.7 , showing low initial aesthetic improvement and moderate wrinkle severity.

Table 1: Baseline Demographic and Clinical Characteristics of Patients Undergoing Skin Tightening Procedures (N = 190)

Variable	n (%) / Mean $\pm$ SD
Age (years)	46.7 ± 9.8
Female	142 (74.7)
Male	48 (25.3)
Body mass index (kg/m ²)	27.4 ± 4.2
Smokers	38 (20.0)
Fitzpatrick skin type II–III	112 (58.9)
Fitzpatrick skin type IV–V	78 (41.1)
Facial skin laxity	126 (66.3)
Neck skin laxity	64 (33.7)
Mild laxity	82 (43.2)
Moderate laxity	108 (56.8)
Previous cosmetic procedure	49 (25.8)
Baseline GAIS score	1.4 ± 0.5
Baseline WSRS score	3.6 ± 0.7

Single-modality treatment was used in 101 (53.2%) patients, while 89 (46.8%) received combination therapy. Radiofrequency was the most common modality (54, 28.4%), followed by HIFU (42, 22.1%), fractional laser resurfacing (31, 16.3%), microneedling radiofrequency (28, 14.7%), and PRP-assisted treatment (21, 11.1%). Patients received an average of 3.2 ± 1.1 sessions, with a mean treatment interval of 4.6 ± 1.3 weeks.

Table 2: Treatment Modalities and Procedural Characteristics

Variable	n (%) / Mean $\pm$ SD
Radiofrequency-based treatment	54 (28.4)
High-intensity focused ultrasound	42 (22.1)
Fractional laser resurfacing	31 (16.3)
Microneedling radiofrequency	28 (14.7)
PRP-assisted treatment	21 (11.1)

Combination therapy	89 (46.8)
Single modality treatment	101 (53.2)
Number of sessions	3.2 ± 1.1
Treatment interval (weeks)	4.6 ± 1.3
Procedure duration (minutes)	54.8 ± 16.7
Topical/local anesthesia used	156 (82.1)

At six months, skin tightening outcomes improved significantly. GAIS increased from 1.4 ± 0.5 to 3.8 ± 0.7 , WSRS decreased from 3.6 ± 0.7 to 2.1 ± 0.6 , and skin elasticity improved from 42.5 ± 8.4 to 61.8 ± 9.6 , all with $p < 0.001$. Patient satisfaction also rose from $54.6 \pm 13.2\%$ to $86.4 \pm 10.5\%$, and successful treatment response was achieved in 151 (79.5%) patients.

Table 3: Clinical Outcomes Before and Six Months After Treatment

Variable	Baseline	Six Months	p-value
GAIS score	1.4 ± 0.5	3.8 ± 0.7	<0.001
WSRS score	3.6 ± 0.7	2.1 ± 0.6	<0.001
Skin elasticity score	42.5 ± 8.4	61.8 ± 9.6	<0.001
Physician global assessment	2.1 ± 0.6	4.0 ± 0.7	<0.001
Patient satisfaction score (%)	54.6 ± 13.2	86.4 ± 10.5	<0.001
Successful treatment response	—	151 (79.5)	—

Responders were younger than non-responders (44.9 ± 8.7 vs. 53.6 ± 10.2 years; $p < 0.001$) and had lower BMI (26.8 ± 3.9 vs. 29.7 ± 4.6 kg/m²; $p < 0.001$). Smoking, moderate laxity, previous cosmetic procedures, and adverse events were more frequent among non-responders. Combination therapy was more common among responders (53.0% vs. 23.1%; $p = 0.001$), and satisfaction was much higher in responders ($90.8 \pm 7.4\%$ vs. $69.3 \pm 8.6\%$).

Table 4: Comparison Between Responders and Non-Responders to Skin Tightening Treatment

Variable	Responders (n=151)	Non-Responders (n=39)	p-value
Age (years), Mean $\pm$ SD	44.9 ± 8.7	53.6 ± 10.2	<0.001
Body mass index (kg/m ²), Mean $\pm$ SD	26.8 ± 3.9	29.7 ± 4.6	<0.001
Smokers, n (%)	22 (14.6)	16 (41.0)	<0.001
Moderate laxity, n (%)	78 (51.7)	30 (76.9)	0.005

Advancements In Non-Invasive Skin Tightening Procedures: Combining Dermatologic And Surgical Modalities

Combination therapy, n (%)	80 (53.0)	9 (23.1)	0.001
Previous cosmetic procedure, n (%)	34 (22.5)	15 (38.5)	0.041
Patient satisfaction score (%), Mean $\pm$ SD	90.8 $\pm$ 7.4	69.3 $\pm$ 8.6	<0.001
Adverse events, n (%)	19 (12.6)	11 (28.2)	0.019

DISCUSSION

The non-invasive skin tightening procedures were found to be effective in 190 patients and both dermatologic and combined procedures significantly improved skin laxity, wrinkle severity, skin elasticity and patient satisfaction in this patient group. A total of 79.5% of patients had successful treatment results and favorable results were associated with younger age, lower BMI, combination therapy and lesser skin laxity. The results are in line with the increased importance of multimodal non-invasive aesthetic procedures as alternatives to surgical procedures for patients looking for anti-aging without surgery. The average age of the study population was 46.7 ± 9.8 years and 74.7% of participants were females, which is indicative of the higher market requirements for esthetic procedures in females. The mean BMI was 27.4 ± 4.2 kg/m² with more facial skin laxity than neck skin laxity. There was moderate skin laxity in more than 50% of the patients, and a significant amount of aesthetic concern was seen prior to treatment in both the GAIS and WSRS scores. Previous studies have also shown that middle-aged women make up the bulk of people who undergo non-invasive skin tightening treatments, and that there are more women than men seeking treatments for facial aging, particularly for moderate skin laxity [17]. When it came to treatment modalities, radiofrequency was the most widely used treatment, followed by high-intensity focused ultrasound, fractional laser resurfacing, microneedling radiofrequency, and PRP-assisted therapy. Almost 50% of the patients received combination therapy, and the rest received a single therapy modality. Patients needed a mean number of 3.2 ± 1.1 treatment sessions spaced by a mean of 4.6 ± 1.3 weeks apart. Previous research has also shown that more and more energy-based devices and combination protocols are being used as they aim to affect several layers of skin ageing and thus produce more rejuvenation than a single-modality treatment. After 6 months, there was significant clinical improvement. The Mean GAIS improved from 1.4 ± 0.5 to 3.8 ± 0.7 and WSRS decreased from 3.6 ± 0.7 to 2.1 ± 0.6 , showing a significant decrease in wrinkle severity in Mean GAIS. The elasticity of the skin rose from 42.5 ± 8.4 to 61.8 ± 9.6 , the physician global assessment improved significantly and patient satisfaction levels jumped from $54.6 \pm 13.2\%$ to $86.4 \pm 10.5\%$. 79.5% of patients had overall treatment success. Other studies have also shown that wrinkle reduction, skin firmness, elasticity, facial contour

and overall satisfaction increase significantly after radiofrequency, ultrasound-based or combined rejuvenation treatments. Several important predictors of treatment efficacy were found in a comparison between responders and non-responders. Responders were significantly younger (44.9 ± 8.7 vs. 53.6 ± 10.2 years), had lower BMI (26.8 ± 3.9 vs. 29.7 ± 4.6 kg/m²), and were less likely to smoke. Non-responders were more likely to have moderate skin laxity, previous cosmetic procedures and adverse events. Responders were significantly more likely to receive combination therapy (53.0% vs. 23.1%) and were much more satisfied with the treatment ($90.8 \pm 7.4\%$ vs. $69.3 \pm 8.6\%$). These results are consistent with previous studies, which have found that patients with younger age, better skin quality, lower BMI, and less advanced tissue laxity tend to have better collagen remodeling and clinical results after non-invasive skin tightening treatments [19]. It's likely that the benefits of combination therapy are the synergy of the different treatments. Radiofrequency induces collagen contraction in the skin's dermis layer, ultrasound penetrates deeper into the fascial layers, fractional laser resurfacing and PRP act on the epidermal layer to enhance the quality of the skin and collagen regeneration. Previous studies have also shown that sequential application of several modalities results in enhanced skin tightening, texture, elasticity, and wrinkle reduction than single modality, without significantly increasing the rates of complications. Treatment response was also affected by BMI. Clinical improvement was significantly greater among patients with lower BMI as compared to overweight patients, while treatment success was comparatively lower among overweight patients. An increase in subcutaneous adiposity can decrease the penetration of energy, and can also play a role in maintaining skin laxity even after collagen remodeling. Other studies have also shown obesity as a predictor of lower success rates after non-invasive facial rejuvenation treatments, and the importance of weight optimization prior to cosmetic treatment [20].

Limitations

This study has several limitations. First, the retrospective design may have introduced selection and information bias because the analysis relied on previously documented clinical records and photographic assessments. Second, the study was conducted at a single center with a sample size of 190 patients, which may limit the generalizability of the findings. Considerable heterogeneity existed in treatment protocols, including differences in energy-based devices, treatment parameters, number of sessions, and combination techniques, which may have influenced treatment outcomes. Objective assessment of collagen remodeling using histological analysis or advanced imaging modalities was not performed, and most outcome measures relied on clinical scoring systems and patient-reported satisfaction.

CONCLUSION

Non-invasive skin tightening procedures provide effective and safe treatment for mild-to-moderate skin laxity, resulting in significant improvements in skin firmness,

wrinkle severity, skin elasticity, aesthetic appearance, and patient satisfaction. Combination treatment strategies incorporating multiple dermatologic and minimally invasive modalities demonstrated superior clinical outcomes compared with single-modality therapy. Younger age, lower body mass index, absence of smoking, milder skin laxity, and use of combination therapy were associated with better treatment response. These findings support individualized multimodal treatment approaches as an effective alternative to conventional surgical skin tightening in appropriately selected patients while maintaining a favorable safety profile and minimal recovery time.

REFERENCE

1. Rajanala, S., Kaminer, M. S., & Rohrer, T. E. (2025). The History of Non-Laser Energy-Based Devices in Dermatology. *Dermatologic Surgery*, 51(6), 575-582.
2. Fallahi, H. R., & Damsaz, M. (2026). Minimally Invasive Facial Rejuvenation. In *Handbook of Oral and Maxillofacial Surgery and Implantology* (pp. 1-75). Cham: Springer Nature Switzerland.
3. Vranis, N. M., Dyan, E., & Theodorou, S. (2024). Evolution of Non-surgical/Minimally Invasive Treatments. In *Landmark Papers in Plastic Surgery: Commented Guide by Authors and Experts* (pp. 397-407). Cham: Springer International Publishing.
4. Shridharani, S. M., Ribaud, J. G., & Kennedy, M. L. (2025). Skin tightening technologies in body contouring. *Plastic and Reconstructive Surgery*, 155(5), 935e-946e.
5. Sheppard, T. K., Quiñonez, R. L., Burgess, C. M., Taylor, S. C., & Agbai, O. N. (2025). Cosmetic Laser Procedures and Nonsurgical Body Contouring in Patients With Skin of Color. *Cutis*, 116(2), 58-64.
6. Haykal, D., Sattler, S., Verner, I., Madhumita, M., & Cartier, H. (2025). A systematic review of high-intensity focused ultrasound in skin tightening and body contouring. *Aesthetic Surgery Journal*, 45(7), 690-698.
7. Atiyeh, B., Greige, G., Hajjar, M., Rabay, C., & Emsieh, S. (2025). Clinical Relevance of Skin Tightening with Minimally Invasive Subdermal Energy-Based (EB) Technologies. *Aesthetic Plastic Surgery*, 49(18), 5186-5198.
8. Newman, J. (Ed.). (2023). *Non-Invasive Skin Treatments, An Issue of Facial Plastic Surgery Clinics of North America, E-Book: Non-Invasive Skin Treatments, An Issue of Facial Plastic Surgery Clinics of North America, E-Book* (Vol. 31, No. 4). Elsevier Health Sciences.
9. Meretsky, C. R., Polychronis, A., & Schiuma, A. T. (2024). A comparative analysis of the advances in scar reduction: Techniques, technologies, and efficacy in plastic surgery. *Cureus*, 16(8).
10. Liu, Y., Mao, R., Xiao, M., Zhu, W., Liu, Y., & Xiao, H. (2024). Facial rejuvenation: a global trend of dermatological procedures in the last decade. *Plastic and Reconstructive Surgery–Global Open*, 12(6), e5801.
11. Jaiswal, S., & Jawade, S. (2024). Microneedling in dermatology: a comprehensive review of applications, techniques, and outcomes. *Cureus*, 16(9).
12. Manzano-Finol, A., Parra-Pelosi, H., Cubillos-Valencia, G., Urdaneta, J., Rivera-Porras, D., Chacín, M., & Bermúdez, V. (2025). Laser-assisted lipolysis: a promising alternative to traditional liposuction. *Aesthetic Plastic Surgery*, 49(19), 5522-5531.
13. Miller, A. D., & Ortiz, A. E. (2022). Update on facial noninvasive skin tightening. *Advances in Cosmetic Surgery*, 5(1), 145-155.
14. Mazzoni, D., Lin, M. J., Dubin, D. P., & Khorasani, H. (2019). Review of non-invasive body contouring devices for fat reduction, skin tightening and muscle definition. *Australasian journal of Dermatology*, 60(4), 278-283.
15. Malone, C. H., Walters, N., Stroh, R., & Munavalli, G. (2021). New technologies in skin tightening. *Current Otorhinolaryngology Reports*, 9(4), 422-435.
16. Eskandar, K. *Frontiers in Dermatological Innovation: a Systematic Review of Emerging Therapies, Technologies, and Clinical Practices. Dermatology Review/Przegląd Dermatologiczny*, 112(3), 161-175.
17. Kwan, K. R., Kolansky, Z., Abittan, B. J., Farberg, A. S., & Goldenberg, G. (2020). Skin tightening. *Cutis*, 106(3), 134-137.
18. Abarca-Pineda, Y. A., Alaniz, I. C., Ibraheam, A., Bhasin, I., Alasaadi, S., García, M. L., ... & Yin Cai, L. (2025). Conventional and Emerging Surgical and Non-surgical Approaches to the Management of Skin Burn Scars: A Comprehensive Review. *Cureus*, 17(8), e90982.
19. O'Connor, K., Kandula, P., & Kaminer, M. (2021). Non-surgical skin tightening. *Plastic and Aesthetic Research*, 8, N-A.
20. Haney, B. (2024). Nonsurgical Facial Skin Tightening. In *Aesthetic Procedures: Nurse Practitioner's Guide to Cosmetic Dermatology* (pp. 241-249). Cham: Springer International Publishing....