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Case Series

A retrospective case series on midface augmentation using hyaluronic acid fillers and combination therapies

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ABSTRACT

Mid-face volume loss from skeletal resorption, soft-tissue atrophy, and reduced dermal support is a key feature of facial ageing. Hyaluronic acid fillers such as Restylane® offer predictable, minimally invasive contour restoration. Combination approaches with adjunctive therapies may enhance results. This retrospective case series reviews individualized multimodal plans for mid-face augmentation using Restylane® fillers. 5 adults (3 males, 2 females; 35–50 years) presented with moderate-to-severe mid-face volume loss with malar hollowing, prominent nasolabial folds, and reduced cheek projection. Treatment plans combined Restylane® fillers (Lyft, Classyc, Defyne, Volyme, Vital) with energy-based devices, botulinum toxin A, and chemical peels, tailored to anatomical needs. Assessments used global aesthetic improvement scale, Medicis midface volume scale, and wrinkle severity rating scale. All patients showed improved contour and skin quality with no adverse events. Multimodal protocols integrating Restylane® fillers with complementary treatments provide effective, individualized mid-face rejuvenation. Prospective studies are needed to validate these findings.

Keywords: Midface augmentation, Hyaluronic acid skin boosters, Restylane®, Botulinum toxin type A, Energy based devices

INTRODUCTION

Facial ageing involves changes in bone and soft tissue. With age, skeletal resorption causes posterior maxillary shift, orbital rim descent, and mandibular contraction, leading to facial hollowing. Tooth loss further accelerates alveolar resorption and mid-face volume loss.[1]

Mid-face volume loss is a key sign of facial ageing, seen as sunken cheeks, deep nasolabial folds, and reduced fullness. Declining hyaluronic acid (HA), collagen, and elastin, along with skeletal remodelling and fat redistribution, contribute to decreased dermal support, laxity, and soft tissue descent. In response to the growing preference for non-surgical aesthetic interventions, minimally invasive techniques have gained prominence for restoring mid-facial volume and rejuvenating contours.[2] Among these, HA-based dermal fillers are widely used due to their biocompatibility, reversibility, and sustained aesthetic outcomes.[3]

Restylane (Galderma) is an HA-based dermal filler, CE-marked in 1996 and Food and Drug administration (FDA)-approved in 2003 for aesthetic correction of fine lines in regions such as the glabella, cheeks, hands, perioral area, and nasolabial folds. It is also indicated for orolabial and periocular enhancement and lip augmentation in adults. Owing to its stable, non-soluble formulation, Restylane effectively corrects asymmetries and age-related contour loss.[2,4] Over time, the formulation has evolved technologically to meet diverse clinical needs, including the addition of 0.3% lidocaine in most products since 2010 to enhance patient comfort.[5]

Combining energy-based modalities such as radiofrequency microneedling with injectable neuromodulators or HA fillers has been reported to improve facial rejuvenation outcomes, although concomitant use is not generally recommended.[6] Botulinum toxin type A (BoNT-A) and HA fillers can be applied synergistically across facial regions to address static wrinkles and restore structural balance.[7] Pre-treatment with BoNT-A, ideally 2 weeks before filler administration, optimizes results.[8]

This case series presents 5 real-world patients who underwent individualized regimens combining Restylane with adjunctive aesthetic treatments, illustrating personalized, multimodal approaches in clinical practice.

CASE SERIES

This retrospective case series, conducted at a single aesthetic dermatology centre (December 2024–May 2025), included 5 adults (3 males (M), 2 females (F)) who underwent mid-face rejuvenation with Restylane® fillers, alone or combined with neurotoxins, energy-based devices (EBD), or chemical peels. Informed consent was obtained from all participating patients. Eligible patients showed midface volume loss without contraindications to HA fillers. Clinical notes, procedural details, and standardized photographs were reviewed for demographics, treatment plans, product selection, and outcomes. Procedures were tailored to facial anatomy, product rheology, and patient goals. Restylane® variants, Lyft, Classyc, Defyne, Volyme, and Vital, were selected for structural support, contouring, and skin enhancement, achieving individualized, natural-looking outcomes.

Case 1

A 50-year-old male presented with substantial loss of fullness in the midface area, clearly apparent hollowing below the malar prominence, evidenced by significant indentation in the midface area. Treatment began with an EBD session using a Q-switched laser. After 2 weeks, the patient received Restylane Lyft (1 ml; 0.5 ml per side) for cheek projection and lift, Restylane Defyne (1 ml; 0.5 ml per side) for nasolabial fold correction, and Restylane Vital (1 ml; 0.5 ml per side) to enhance skin quality. Photographs were taken 2 weeks post-treatment to evaluate outcomes (Figures 1-3).

Case 2

A 50-year-old female presented with substantial loss of fullness in the midface area, clearly apparent hollowing below the malar prominence, evidenced by significant indentation in the midface area. Treatment included Restylane Lyft (2 ml; 1 ml per side) for anterior cheek projection and lift, and Restylane Classyc (1 ml; 0.5 ml per side) for tear trough correction. 2 weeks later, chemical peels were performed to enhance skin radiance. Post-peel photographs were taken to evaluate aesthetic outcomes (Figures 1-3).

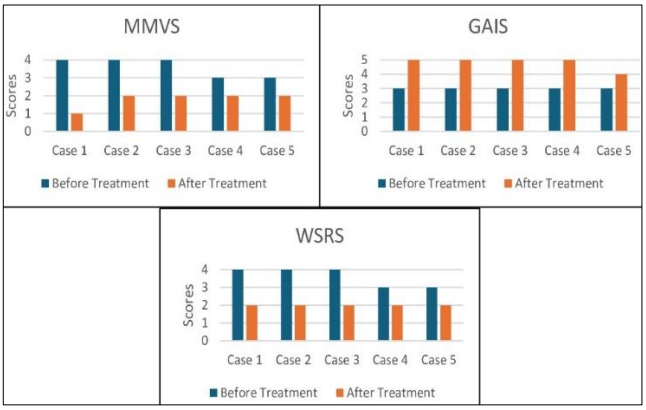

Figure 1: Consolidated outcome scores.

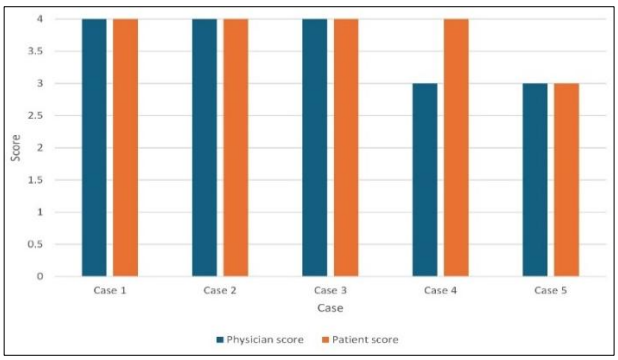

Figure 2: Patient and physician satisfaction global evaluation.

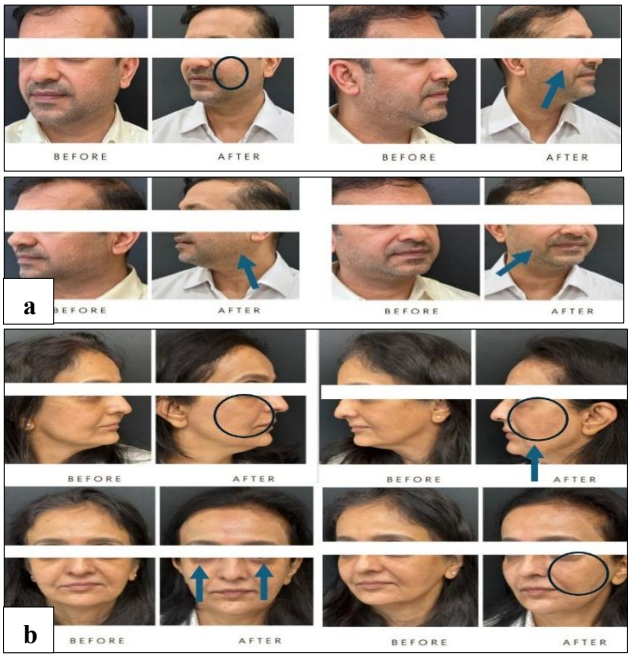

Figure 3: Pre and post photo documentation of (a) case 1 and (b) case 2.

Case 3

A 35-year-old male presented with substantial loss of fullness in the midface area, clearly apparent hollowing below the malar prominence, evidenced by significant indentation in the midface area. The patient was treated with Restylane Lyft (2 ml; 1 ml per side) for projection and lift, Restylane Classyc (1 ml; 0.5 ml per side) for tear trough correction, Restylane Defyne (1 ml; 0.5 ml per side) for nasolabial folds, and Restylane Volyme (1 ml; 0.5 ml per side) for midface volumization and contouring. After 2 weeks, Restylane Vital (3 ml; 1.5 ml per side) was administered to enhance skin quality, along with BoNT-A (10 units; 5 units per side) for frown lines. Aesthetic outcomes were evaluated 2 weeks post-treatment (Figures 1, 2 and 4).

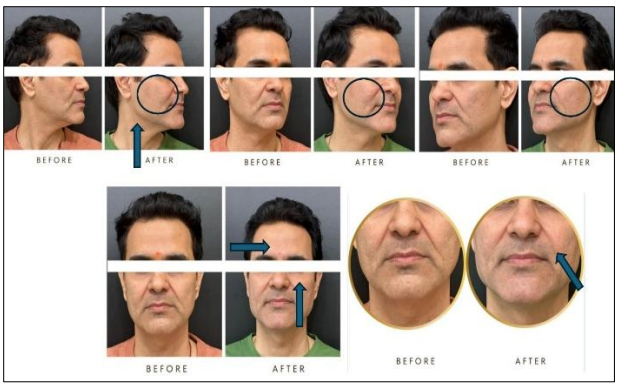

Figure 4: Pre- and post-treatment images of case 3 showing restoration of facial volume, nasolabial softening, and periorbital smoothing.

Figure 5: Pre and post photo documentation of (a) case 4 and (b) case 5.

Case 4

A 40-year-old male presented with moderate loss of fullness with slight hollowing below the malar prominence; presence of the naso-jugal groove extending past mid-eye. Initial treatment included Restylane Lyft (1 ml; 0.5 ml per side) for anterior cheek projection, Restylane Classyc (1 ml; 0.5 ml per side) for tear trough correction, and Restylane Volyme (1 ml; 0.5 ml per side) for cheek volumization. A top-up after 1 week involved Restylane Defyne (1 ml; 0.5 ml per side) for nasolabial folds and a neurotoxin (20 units; 10 units per side) for frown lines. Post-treatment photographs were captured after the top-up session (Figures 1, 2 and 5).

Case 5

A 50-year-old female presented with moderate loss of fullness with slight hollowing below the malar prominence; presence of the naso-jugal groove extending past mid-eye. 6 months prior, the patient received Restylane Classyc (1 ml; 0.5 ml per side) for tear trough correction and Restylane Volyme (1 ml; 0.5 ml per side) for cheek augmentation. In the current session, Restylane Lyft (2 ml) was administered for anterior cheek projection, along with a neurotoxin (12 units) for frown lines. Photographs were taken 2 weeks post-procedure (Figures 1, 2 and 5).

Outcome measures

Primary outcomes were assessed using the global aesthetic improvement scale (GAIS), Medicis midface volume scale (MMVS), and wrinkle severity rating scale (WSRS) for nasolabial fold depth. The GAIS measured overall aesthetic improvement on a 5-point scale, while the MMVS quantified midface volume loss and restoration based on structural landmarks (Figure 1).

Secondary outcomes included physician and patient global evaluation scales, which rated overall satisfaction with treatment results on a 4-point scale (Figure 2). At the end of treatment, 3 of 5 patients (cases 1–3) achieved a “very satisfactory” rating (score 4) from both physician and patient evaluations. In case 4, the physician rated the outcome as “moderately satisfactory” (score 3), while the patient rated it “very satisfactory” (score 4). In case 5, both physician and patient rated the result as “moderately satisfactory” (score 3).

DISCUSSION

This case series demonstrates a comprehensive approach using HA fillers for mid-face correction. Fillers with varying rheological properties—from high G′ formulations for lift and support to lower G′ products for dynamic regions—were selected based on individual anatomy and aesthetic needs. Adjunctive treatments such as HA-based SkinBoosters (Restylane® Vital), energy-based devices, neurotoxins, and chemical peels enhanced skin hydration, elasticity, and overall aesthetic outcomes.

HA-based fillers are widely used for facial volume restoration due to their low immunogenicity, biocompatibility, and biodegradability within 1–2 years, depending on the manufacturing process.[9] In this series, Restylane Lyft and Volyme were used for midface

augmentation and Defyne for nasolabial folds, chosen for their proven safety, efficacy, and natural-looking results.

A pilot study evaluating the combined use of intradermal radiofrequency and HA filler for nasolabial fold wrinkle reduction demonstrated that the experimental group receiving RF followed by HA showed significantly greater improvements in both the WSRS and the GAIS compared to HA filler alone.[10] These findings suggest that RF preconditioning enhances dermal collagen stimulation and improves tissue receptivity, thereby optimizing filler integration and aesthetic outcomes.

Consistent with this evidence, case 1 in our series involved an initial session with EBD followed by HA-based treatments for cheek augmentation, nasolabial fold correction, and skin quality enhancement, administered only after complete skin healing post-EBD (Figure 3).

A case report documenting the combined use of chemical peels, dermal fillers, and BoNT-A demonstrated a synergistic effect, leading to enhanced facial rejuvenation outcomes and improved patient satisfaction.[11] Similarly, in case 2, treatment included a peel followed by intradermal Restylane® injections targeting cheek augmentation, nasolabial fold softening, and undereye rejuvenation. Post-treatment assessments revealed improvements in skin texture, pigmentation, and overall quality, along with enhanced midface and periorbital contour and support. These results reinforce evidence that combining chemical resurfacing with structural dermal support deivers superior aesthetic outcomes and greater patient satisfaction (Figure 3).

A multicenter, open-label clinical study evaluating the combined use of BoNT-A and a portfolio of HA fillers across up to 13 facial zones demonstrated high patient satisfaction, with 96.5% of subjects satisfied at 3 weeks and 92.9% at 6 months post-treatment.[7] These findings support the synergistic benefits of combining BoNT-A and HA fillers for full-facial aesthetic rejuvenation. In our case series, Case 3 and case 4 both received neurotoxin in combination with Restylane®, resulting in notable improvements in GAIS and WSRS scores (Figures 4 and 5). Case 5 also received neurotoxin alongside laser and HA-based treatments to target skin laxity and facial lines.

This underscores the complementary roles of BoNT-A in neuromodulation and HA fillers in structural enhancement and skin quality improvement, yielding comprehensive, high-satisfaction outcomes with a favorable safety profile (Figure 5).

While the observed clinical outcomes are favorable, the limited cohort size and retrospective study design constrain the external validity and generalizability of the results. Future investigations incorporating larger patient samples and validated patient-reported outcome measures would enhance the comprehensiveness of the clinical evidence.

CONCLUSION

This case series demonstrates the efficacy and safety of individualised, multimodal facial rejuvenation using Restylane® hyaluronic acid fillers combined with adjunctive treatments such as neurotoxins, energy-based devices, and chemical peels for mid-face volume restoration. Personalised protocols based on anatomical assessment and patient goals achieved notable improvements in facial volume, skin quality, and overall aesthetic satisfaction.

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