Achieving natural facial harmonisation: a clinical review of Restylane facial filler

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Abstract

Facial fillers have become integral to aesthetic medicine, significantly enhancing facial features and restoring a youthful appearance (Evans, 2019). Among the available fillers, achieving a 'natural look' is paramount to maintaining facial harmonisation (Davis, 2020). This natural look ensures subtle enhancements that do not compromise an individual's inherent expressions and features (Wilson, 2022). The increasing demand for natural-looking results underscores the necessity for products that deliver reliable, safe, and aesthetically pleasing outcomes (Thompson and Robinson, 2021).

Key words

▸ Fillers ▸ HA ▸ HA fillers ▸ natural ▸ anti-ageing

Hyaluronic acid (HA) fillers are injectable treatments designed to smooth wrinkles, add volume, and enhance facial contours (Garcia and Patel, 2019). HA is a naturally occurring glycosaminoglycan polysaccharide composed of repeating D-glucuronic acid and N-acetyl-D-glucosamine disaccharide units, forming a linear polysaccharide chain (Duranti et al, 1998). This naturally occurring substance helps retain moisture, contributing to a plump and hydrated appearance (Evans, 2019). When used as a dermal filler, synthetic HA mimics the natural substance, making it a safe and effective option for facial rejuvenation (Duranti et al, 1998).

To create synthetic HA, HA molecules are cross-linked with 1,4-butanediol diglycidyl ether (BDDE). It's crucial to keep the degree of modification to a minimum to reduce the risk of triggering immune responses later on. This low degree of modification is a key feature of NASHA technology products, making them the most similar to natural HA among mainstream fillers.

HA fillers are commonly used to smooth out fine lines and wrinkles (Narins et al, 2003), add volume to areas such as the cheeks and lips (Levy et al, 2009), enhance facial contours and symmetry (Johnson & Lee, 2020), and improve the appearance of scars and other skin depressions (Kim and Chang, 2018). These fillers are particularly indicated for individuals seeking to address signs of aging, such as volume loss and wrinkle formation, without resorting to invasive surgical procedures (Narins et al, 2003; Levy et al, 2009).

Among the types of HA fillers available, Restylane is notable for its versatility, used for fine lines, wrinkles, and adding volume to lips and cheeks (Johnson and Lee, 2020). Each product differs in HA concentration, cross-linking technology, and longevity, allowing practitioners to choose the most suitable filler based on the patient's needs (Levy et al, 2009).

The demand for HA fillers is increasing due to

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several factors. The non-invasive nature of HA fillers, offering minimal downtime, makes them attractive for individuals seeking quick and effective aesthetic improvements (Thompson and Robinson, 2021). Their ability to provide subtle and natural-looking results significantly drives their popularity (Wilson, 2022). Unlike some other fillers, HA fillers can be dissolved if the results are unsatisfactory, providing a safety net for both patients and practitioners (Evans, 2019). Additionally, HA fillers can address a wide range of aesthetic concerns, from fine lines to significant volume loss, catering to a diverse patient demographic (Johnson and Lee, 2020).

Clinical evidence supports the safety and efficacy of Restylane products, with randomised studies demonstrating high effectiveness and long-lasting results, particularly for the correction of nasolabial folds (Carruthers et al, 2005; Narins et al, 2011). These studies show significant improvements maintained for up to 48 weeks in most subjects (Marcus et al, 2019).

About Restylane

Restylane, a hyaluronic acid-based dermal filler, is widely used in aesthetic medicine to address various facial concerns, including wrinkles, volume loss, and facial contouring (Levy et al, 2009). Its formulation includes non-animal stabilised hyaluronic acid (NASHA) technology, which ensures biocompatibility and minimises the risk of allergic reactions (Duranti et al, 1998). NASHA technology represents a paradigm shift in the approach to manufacturing HA fillers, moving away from animal-derived hyaluronic acid, which, despite purification processes, still resulted in high rates of immune reactions. NASHA pioneered the process of cultivating HA from bacterial sources, a technology that now serves as the gold standard for all HA fillers worldwide.

Additionally, within the Restylane portfolio, some products utilise NASHA technology, while others employ Optimal Balance Technology (OBT), offering a range of options to meet different patient needs. The filler provides immediate results, with effects lasting several months depending on the treated area and individual metabolism (Narins et al., 2003). Some Restylane products also include lidocaine to enhance patient comfort during the procedure (Levy et al, 2009).

Restylane is suitable for adults looking to reduce signs of aging, such as nasolabial folds, marionette lines, and crow's feet (Carruthers et al, 2005). It is also effective for enhancing lip volume, contouring cheeks, and improving jawline and chin definition (Johnson and Lee, 2020). Patients seeking non-surgical and reversible aesthetic improvements are ideal candidates for Restylane treatments (Narins et al, 2011).

The mechanism of action for Restylane involves injecting hyaluronic acid into the dermis, where it attracts and retains water, providing volume and hydration to the skin (Evans, 2019). This process smooths out wrinkles and folds, enhances facial contours, and restores lost volume, resulting in a more youthful and refreshed appearance (Narins et al, 2003).

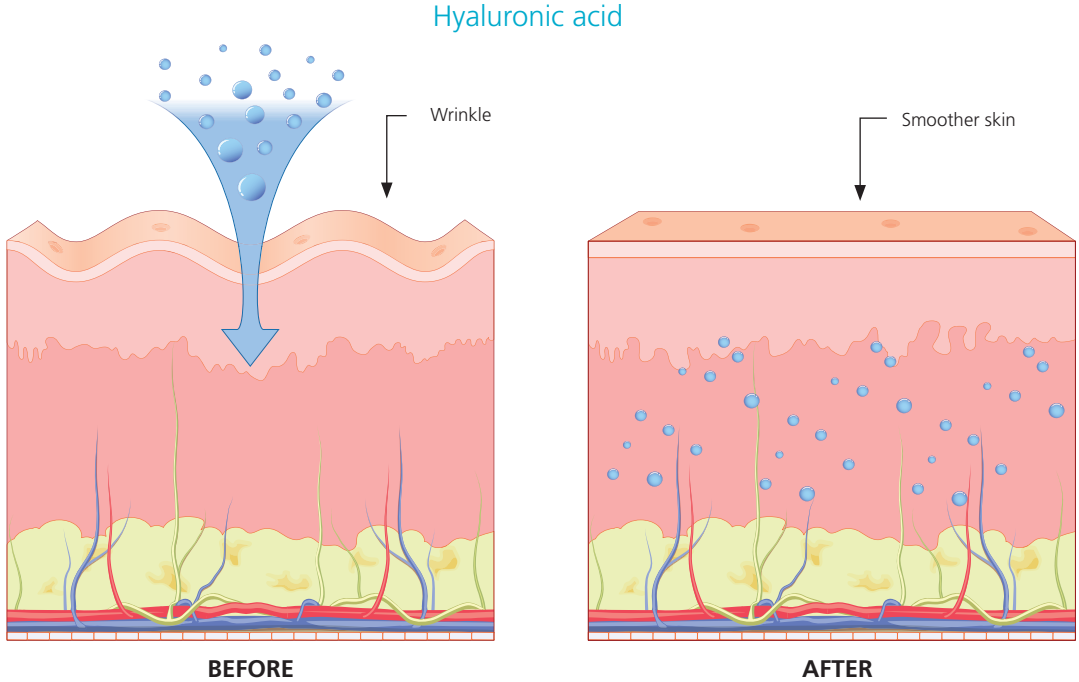

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Figure 1. Wrinkle treatment with hyaluronic acid

Figure 1: Patient one before and after

Figure 2: Patient one before and after

Restylane can be used on various facial areas, including nasolabial folds (Carruthers et al, 2005), marionette lines (Narins et al, 2011), lips (Johnson and Lee, 2020), cheeks (Levy et al, 2009), tear troughs (Garcia & Patel, 2019), chin (Marcus et al, 2019), and jawline (Thompson and Robinson, 2021). Patients typically see immediate improvements after the injection, with optimal results becoming more apparent within a week (Evans, 2019). The longevity of results varies but generally lasts between six to twelve months (Carruthers et al, 2005). The optimal number of treatments depends on individual goals and the specific Restylane product used (Narins et al, 2011). Maintenance treatments are recommended to sustain the desired results (Johnson and Lee, 2020).

Restylane Kysse: achieve 'kissable' lips

Restylane Kysse is specifically designed for lip enhancement, offering natural-looking volume and softness (Levy et al, 2009). It incorporates Optimal Balance Technology™, which allows for flexible movement and natural expression, making it ideal for achieving kissable lips (Narins et al, 2011). Primarily used for augmenting lip volume, defining lip borders, and correcting asymmetry, Restylane Kysse provides a balanced and natural appearance while maintaining the lips' flexibility and movement (Johnson and Lee, 2020).

Notably, Restylane Kysse requires less product compared to other fillers, making it a cost-effective option (Carruthers et al, 2005). Clinical studies have shown that the results can last up to a year, which is longer than many other lip fillers on the market (Marcus et al, 2019). Additionally, the unique rheological properties of Restylane Kysse, such as its optimal balance of viscosity and elasticity, contribute to its natural look and feel, as well as its ability to integrate smoothly into the lip tissue. These properties enhance the overall patient experience by providing long-lasting and aesthetically pleasing results with minimal product use (Baumann, 2020).

Restylane Lyft: for ultimate projection

Restylane Lyft offers robust lifting and projection effects, making it suitable for areas requiring significant lift and contouring (Duranti et al, 1998). It is commonly used to enhance cheek volume, contour the jawline, and improve chin projection (Narins et al, 2003). For patients seeking substantial volumising and lifting effects, Restylane Lyft is an ideal choice, with results typically lasting from six months to a year, and research showing effects even up to 24 months (Huang S, 2020), depending on the treated area and individual metabolic factors (Marcus et al, 2019).

Restylane Lyft's efficacy can be attributed to its specific rheological properties:

- HA concentration: 20 mg/ml
- Swelling factor: 2.8
- G prime (G'): 977

- G double prime (G''): 198
- Particle size: 430 nanometers.

These properties contribute to its ability to provide significant lift and support, making it effective for enhancing facial contours and achieving a more youthful appearance.

Injection protocol and techniques

The injection protocol for Restylane varies based on the treatment area and the specific product used (Levy et al, 2009). Thorough patient assessment, proper hygiene, and precise injection techniques are essential to achieve the best results (Narins et al, 2011). The injection depth depends on the treatment area and the desired outcome, with deeper injections required for volumising effects in the cheeks and chin, and superficial injections suitable for fine lines and lip augmentation (Evans, 2019).

The amount of product used also varies, typically ranging from 0.5 ml to 2 ml per session (Thompson and Robinson, 2021). Techniques such as linear threading, serial puncture, and fanning are commonly used to distribute the filler evenly and achieve natural-looking results (Duranti et al, 1998). The choice of needle, typically 27G to 30G, depends on the viscosity of the filler and the treatment area (Johnson and Lee, 2020).

Patients may experience mild swelling, redness, and bruising post-treatment, which typically subsides within a few days (Evans, 2019).

Incorporating HA fillers into aesthetic treatment plans

With all the above in mind, aesthetic nurses should incorporate HA fillers like Restylane into their patients' treatment plans for several compelling reasons. These fillers offer a minimally invasive solution with quick recovery times, making them highly appealing to patients seeking effective yet convenient aesthetic improvements (Thompson and Robinson, 2021). The natural-looking results and reversibility of HA fillers provide an added layer of safety and satisfaction for patients (Evans, 2019). Moreover, the versatility of HA fillers allows nurses to address a wide range of aesthetic concerns, from fine lines to significant volume loss, catering to a diverse patient demographic (Johnson and Lee, 2020).

To effectively incorporate HA fillers into treatment plans, aesthetic nurses should conduct thorough patient consultations to understand individual goals and expectations (Narins et al, 2011).

Tailoring the treatment to each patient's specific needs ensures optimal outcomes and enhances patient satisfaction. Nurses should also stay updated with the latest injection techniques and product advancements to provide the best possible care (Levy et al, 2009). Continuous education and training are crucial for maintaining high standards of practice and achieving consistent, high-quality results (Garcia and Patel, 2019).

Figure 3: Patient one before and after

Figure 4: Patient one before and after

Case studies

Patient one: jawline definition (5ml total volume)

- History and clinical presentation: a 23-year-old male presented with concerns about his lack of definition in the jawline, particularly in the gonial/mandibular angle
- Indications and product choice: Restylane Lyft was chosen due to its robust lifting effects, making it suitable for areas requiring significant lift and contouring (Duranti et al, 1998). The patient's goal was to enhance jawline definition for a more chiselled appearance
- Technique: a 22g 70mm cannula was used for the procedure. The depth of injection was supraperiosteal, with a total of 5ml of product used along the mandible and into the preauricular area to achieve width and definition in the frontal profile
- Outcomes: following the treatment, the patient achieved a more defined and prominent jawline. The results were noticeable immediately post-injection, with optimal results developing over the following week. The patient reported high satisfaction with the natural enhancement and the non-invasive nature of the procedure (Figures 1, 2, 3 and 4).

Patient two: lip correction and enhancement

- History and clinical presentation: a 35-year-old female required a lip dissolving treatment due to previously misplaced filler that had migrated
- Indications and product choice: after dissolving the old filler, Restylane Kysse was used for the refreshment procedure. This product was chosen for its ability to offer natural-looking volume and flexibility, thanks to Optimal Balance Technology™ (Narins et al, 2011)
- Technique: cannula tsk 25g 38mm
- Outcomes: the patient's lips were enhanced with balanced volume and improved definition. The use of a cannula minimised trauma and ensured even distribution. Results were long-lasting, with significant improvement in lip symmetry and appearance. The patient expressed satisfaction with the comfortable procedure and natural results. (Figures 5, 6 and 7).

Conclusion

In conclusion, Restylane and other HA fillers play a crucial role in modern aesthetic practice, offering safe, effective, and versatile solutions for facial rejuvenation and enhancement (Evans, 2019). The evidence-based benefits, including natural-looking results, minimal downtime, and reversibility, make them a preferred

Figure 5: Patient two before and after

Figure 6: Patient two before and after

Figure 7: Patient two before and after

choice for both patients and practitioners (Davis, 2020). By incorporating these fillers into treatment plans, aesthetic nurses can meet the growing demand for non-invasive aesthetic improvements and help patients achieve their desired outcomes with confidence and satisfaction (Thompson and Robinson, 2021). The continued advancement and refinement of HA fillers will undoubtedly enhance their value in aesthetic medicine, ensuring they remain a cornerstone of facial harmonisation and rejuvenation (Wilson, 2022).

Adverse events

Adverse events should be reported. For the UK, reporting forms and information can be found at www.mhra.gov.uk/yellowcard or search for Yellow Card in the Google Play or Apple app store.

For Ireland, suspected adverse events can be reported via HPRA Pharmacovigilance website: www.hpra.ie; adverse events should also be reported to Galderma (UK) Ltd, Email: medinfo.uk@galderma.com Tel: +44 (0) 300 3035674

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