Many hyaluronic acid products are a formulation of non-animal stabilised hyaluronic acid (NASHA)-based gel developed specifically for shaping and reconstructing the ageing face, as well as to rebalance a younger face. Restylane, for example, is an injectable gel that enhances appearance by restoring the skin’s volume, smoothing out wrinkles, enhancing lips and revitalising the overall look of the skin.

Neurotoxins, such as the well-recognised and used botulinum toxin A (e.g. BOTOX/Vitsabel, Azzalure), cause paralysis by inhibiting the acetylcholine (ACh) release at the neuromuscular junction. By injecting botulinum toxin in a therapeutic modality, it is possible to treat regional involuntary muscle disorders, as well as for aesthetic requirements. These neurotoxins allow for a relaxed appearance and effectively reduce small lines and folds, such as frown lines and crow’s feet.

Although hyaluronic acid is well known as a treatment for facial lines and wrinkles, it has allowed for a number of advances in the area of aesthetic and reconstructive surgery. By adding volume to a sunken mid-face on the supraperiostal plane, an excellent lifting effect can be achieved, which reduces the deepness of the nasolabial fold, lifts the corners of the mouth, and hides the venous...
complex around the eye area, without being invasive. The ageing of facial features includes sagging cheeks and jowl, and buccolabial folds. These materials and techniques therefore provide volume expansion within the dermis, and the smoothing out of overlying facial wrinkles and enhancement of facial contours.

**Soft Lift concept**
The modern Soft Lift is a combination of restoring lost volume and rehydration of the ageing skin, as well as relaxing hyperactive muscle areas with a neurotoxin—without being surgically invasive. Current surgical procedures for facial rejuvenation have undergone a significant change owing to the introduction of minimally-invasive technologies to diminish the age-associated changes of the face. Using the Soft Lift technique, it is possible to combat components like volume loss and the influence of gravity in the face. Combined with the technology of Pix'L microcannulae, the physician is able to inject NASHA gel with a greater amount of precision. These cannulae have been tried, tested and proven to give convincing results with low levels of pain and tissue trauma, especially in the orbital region, which is a delicate area comprising thin skin and a venous complex that can easily bruise. Indeed, treating the sensitive eye area has been a challenge for many years, and many alternative solutions have been tried. The Pix'L+ microcannulae have been specifically developed for this indication and the delicate region.

In matters of gender and age, the Soft Lift has a broad range of application. The male cosmetic population has been more timid with regard to facial rejuvenation. Men also have aesthetic needs, but the areas of treatment are different from that of women and require a different amount of injectable filler for each problem. In the same way, it is possible to treat women to restore volume and, when sculpting facial contours, these procedures are perfect for male patients also. The Soft Lift is likewise applicable for both male and female patients. With regard to age, dermal fillers for the under-eye area can be used as a tool to sculpt a young woman aged 18 years, as well as a 75-year-old woman. There is no upper age limit when using injectable fillers. If it is not affected by medical reasons or poor skin quality, the HA treatments can provide an unlimited effect.

Patient selection also plays an important role in success; choosing patients who will truly benefit and have reasonable expectations are usually satisfied with minimally-invasive treatments. Treating the patient on different facial areas with the Pix'L cannula can provide an instant and evenly spread result with minimal recovery time and fewer side-effects (e.g. bruising and post-treatment swelling). In this way, the Soft Lift is a much more comfortable experience for the patient.

**Methods**
In this study, the authors included five healthy women (using six different treatments) with or without prior use of hyaluronic acid and neurotoxin products. The patients were well informed about the procedure, its positive...
NAshA gel is a biocompatible, biodegradable, injectable hyaluronic acid. It elongates the fibroblasts, creating new collagen in the dermis. In 2007, a study found that the Restylane filler, by elasticity, which induces collagen production in the subcutaneous filling wrinkles and lines, correcting facial contours, and products are used for soft tissue augmentation, such as well-known as aesthetic beauty treatments. The different products and quantities in the dermis, subcutis/hypodermis or injected using different techniques in small or large is slowly broken down in a natural way in the body. The contents can be minimally-modified hyaluronic acid that is similar to that described as a natural sugar-like polymer, and Restylane which is naturally found in the body. The Restylane family of products are cross-linked hyaluronic acid. It is a crystal-clear gel that is easy to use and lift the ageing face with NAshA gels (Figures 2–4).

Hyaluronic acid
NAshA gel is a biocompatible, biodegradable, injectable and non-toxic gel. The Restylane family of products are well-known as aesthetic beauty treatments. The different products are used for soft tissue augmentation, such as filling wrinkles and lines, correcting facial contours, and reshaping the face by constant shape in the subcutaneous layers. The gel improves skin quality by increasing skin elasticity, which induces collagen production in the dermis. In 2007, a study found that the Restylane filler, by stretching the fibroblasts, creates new collagen in the skin. At the same time, it inhibits the break down of existing collagen.

Restylane is a well-documented and researched cross-linked hyaluronic acid. It is a crystal-clear gel that is injected using different techniques in small or large quantities in the dermis, subcutis/hypodermis or epifascial/epiperiostal on the bone. Restylane consists of a minimally-modified hyaluronic acid that is similar to that which is naturally found in the body. The contents can be described as a natural sugar-like polymer, and Restylane is slowly broken down in a natural way in the body. Restylane SubQ is a NAshA product indicated for deep subcutaneous or supraperiostal injection to replace volume loss in facial adipose tissues and create more defined facial contours. This study shows that the effect of a Restylane/Restylane SubQ treatment, together with an additional follow up treatment, can last for as long as 18 months.

Neurotoxins
The use of neurotoxins such as BOTOX/Vistabel and Azzalure (all of which are botulinum toxin type A), should be regularly combined to achieve an excellent result. They support a relaxed appearance and effectively reduce lines and folds (Figure 5)–frown lines, crow’s feet, forehead creases, neck bands, gummy smile, and masseter muscle hypertrophy can be safely and successfully treated. Patients who require minimally-invasive procedures are fond of this effective and high rate of improvement, with rapid onset and a long duration of action (longer than 4 months for some patients). Knowledge about the mechanisms of action and the ability to use neurotoxins as an adjunctive treatment are mandatory for those working in the field of facial cosmetic surgery.

The therapeutic effects of botulinum toxin are principally, if not exclusively, derived from an alteration in the release of ACh at pre-synaptic neurons. Botulinum toxin A causes paralysis by inhibiting ACh release at the neuromuscular junction. This is accomplished in three steps:

- The toxin binds the nerve
- The toxin is internalised into the nerve
- The toxin is cleaved by internal proteolytic enzymes, and the degradation by-products interfere with the normal process of vesicle fusion to the plasma membrane.

This results in the inhibition of the exocytosis of ACh.

Injection techniques
The importance of choosing the right product and right consistency of product for the specific part of the face, as well as for different patients with different skin quality.

![Image A](image1.png)
![Image B](image2.png)

Figure 1 This 40-year-old woman asked for more harmony in the oculofacial area and the dorsum of her nose. Treatment with 0.2 ml Restylane Lidocaine, with a sharp needle. (A) before and (B) immediately after.

Figure 2 Oculofacial area of a 44-year-old woman treated with the reinforced P<sub>L</sub>+ microcannulae 28. (A) before treatment and (B) 4 weeks later.
Figure 3 40-year-old woman after injecting 0.3 ml Restylane Touch per side with the reinforced Pix'L+ micro-cannulae 28 in the oculofacial area (A) before treatment and (B) 1 week post-treatment.

Figure 4 47-year-old woman treated with full-face Soft Lift. Using neurotoxins to release the activity of the corrugator/ procerus muscles and the orbicularis muscle laterally (total 50 iu Vistabel). The mid-face was treated with 25 Pix'L cannula using Restylane Perlane (2 ml each side), by treating the medial and slightly lateral cheek and the most medial nasolabial fold at the same injection site. The lower eyelid fold was treated with 28 Pix'L cannula and Restylane Touch (0.5 ml/side). To rejuvenate the lower face, corners of the mouth, and the frontal chin line, the authors used the 25 Pix'L cannula with 1 ml Restylane Perlane at each site. Lastly, the authors refined the thinner facial lines in the corrugator and frontalis areas with 1 ml Restylane using the original sharp cannula (A) before treatment, and (B) after 4 weeks.

> and age, is very important for achieving the optimal aesthetic results. The Pix'L range of flexible and rigid micro-cannulae provides mechanical resistance with high flexibility and easy insertion into the tissue with a special profile for the tip2. For the use of the blunt Pix'L cannula, it is necessary to primarily puncture the skin with a sharp cannula of the same diameter (or for easy handling one size larger than the cannula itself). The authors recommend tunnelling the dermis with the sharp needle using a fan technique, before changing to the longer and more flexible Pix'L cannula. Through a single-entry point the cannula can easily and safely penetrate the epidermis to reach the dermal layers and wider areas without discomfort to the patient. Avoid turning the needle more than 120–150°, otherwise there is a small risk of breaking the cannula. This is why tunnelling before treatment is so important; the microcannula should only dissect the dermal tissue layers, but not pass resistance. By using this method, small vessels and nerves become displaced and local damage is avoided. Afterwards, the hyaluronic acid gel can be injected smoothly using the anterograde or retrograde technique.

The advantages of using this technique are low levels of pain and tissue trauma, with a high quality of precision while injecting the material. The approach is practically painless, the need for topical anaesthetics such as EMLA cream is not necessary, and the preparation time before the injection is reduced to only the disinfection of the treatment zone.

However, the skin can be less elastic and quite difficult to pass through 6–9 months after a facelift procedure, or skin with pronounced elastosis, after deep laser or chemical peel treatments, or following years of heavy acne episodes. In these cases the Pix'L cannula may not be the right instrument to use.

While the Pix'L micro-cannulae are very useful tools to restore facial volume, frequently used and well tested techniques should not be ignored. For example, treating the nose with hyaluronic acid is a fantastic technique to approach an holistic and full treatment of the oculofacial area, but using the flexible Pix'L cannula here may prove a disadvantage, so the working tool should be a sharp needle.

Results

The authors restored the lack of volume in the face and were able to give radiance back to the skin using the Restylane products and the Pix'L cannula, combined with botulinum toxin A.

For women aged in their late 30s, the Soft Lift concept can potentially prevent early ageing by regularly refreshing the skin using Restylane Vital Light (1-2ml per side, using a 27 gauge cannula). At the same time, it is possible to prevent the mid-face from decreasing in volume by setting small volumes of Restylane/Perlane (1-1.5 ml per side) on the highest point of the cheekbones (Figures 2–4). By shaping the nasal area it is possible to create a more harmonious face with a little volume. Therefore, the use of a sharp needle has many
advantages competing with the Pix'L cannula. It is possible to pronounce the central facial triangle (CFT) with high projecting zygomatic bones and a juvenescent chin. By reducing the mentalis muscle activity (strong chin shape) at the same time, and the sometimes hypertrophic masseter muscles, it is possible to create an even more harmonious shape. Neurotoxins such as Vistabel are a perfect tool to shape these muscles and to perfect a juvenile face. Other than restoring volume, hyaluronic acid slows down the ageing process. Of course, skin excess cannot be completely avoided by treating the patient with a Soft Lift every 6–12 months.

By planning to improve the facial contours, it is good practice to inject the big ‘molecules’ first and end with the more superficial injectable products, for example at the tear trough, the lateral part with thicker skin with more ‘heavy’ products (e.g. Perlane, Perlane Lidocaine), and the medial part with smoother products (e.g. Restylane Touch). As a result, it is possible to avoid bubbles and unevenness in the thinnest part of the medial eye area.

**Discussion**

The Soft Lift is a technique for the rejuvenation of the face, which expands the palette of options available to the physician. The principles are based on the idea of volume restoration and rehydration. The Soft Lift is less aggressive than invasive surgery, and preventive with regard to the ageing process. Enhancing the quality of the skin and returning lost elasticity are also significant aims of this technique. With the huge range of products in the hyaluronic acid family to choose from, the physician is able to find the right product for the right facial area.

The expectation is that in future invasive procedures can be delayed owing to the high quality and longevity of results using this technique. Indeed, in some cases the Soft Lift concept might even be a perfect alternative to more...
aggressive surgical procedures, which often increase the risk of changes to the temporal hairline, and visible scars. There are women who absolutely want to avoid any invasive procedures, but still want a rejuvenating and lifting effect. By regularly injecting NASHA products in the right place, with the right amount of material, the desired effect of regaining angles and curves without a scalpel can be achieved.

The deep wish of the new generation of women to retain their own identity and facial character is also very much affecting the future of aesthetic medicine. These patients ask for a good facial balance with a gentle technique and subtle change; and with products they can count on that have a short downtime. If, however, the patient seeks a rhytidectomy, it is important for the facial plastic surgeon to determine the characteristics that are contributing to the patient’s ageing appearance. A comprehensive approach to the ageing face may include many different procedures, such as endoscopic brow and/or mid-face lifting, blepharoplasty, chin and malar implantation, and chemical/laser exfoliation in addition to rhytidectomy. In these cases, the Soft Lift is the perfect tool to combine both before and after facial surgery. Before the procedure it can be used to rehydrate the skin, and postoperatively to correct the nasolabial fold, the periorbital area, and after the healing process to lift the cheekbone area.

The Soft Lift can also be used after duplication of the superficial muscularaponeurotic system (SMAS) face-lift without any risks, by applying the gel with the blunt cannula above the operated structures. The use of the Pix’L cannula can, however, be slightly more demanding after the invasive facial procedure owing to dermal/subdermal postoperative scars. Additionally, there is the hope that the incidence of secondary facial surgery—mostly carried out at the ages of 65-75 years—can be dramatically reduced. Treating older patients with NASHA gels before the age of the Pix’L cannula was not particularly successful; loss of skin elasticity, excess of skin, and a sagging mid-face made the procedure meaningless. By having the possibility to inject the gel smoothly and regularly under the cutis, it is possible to avoid unevenness and disharmony. It is amazing to see that with this technique even women older than 75 years (Figure 6), women with sun damaged skin, and acne patients can achieve lovely results.

The Pix’L micro-cannulae offer the possibility to reduce the risk of tissue damage, and in that way haematoma can be avoided. This makes the Soft Lift concept, together with the use of the cannula, even more attractive. The design of the cannula regulates the flow-rate, provides a homogenous filling effect, and is less painful than the conventional use of sharp needles, providing better results and fewer side-effects. The individual facial balance allows for the transition from single-site injections to a minimally-invasive face-lift in age-appropriate patients (Figure 5). The downtime after a Soft Lift treatment with more than 6 ml can be positively influenced by the avoidance of non-steroidal anti-inflammatory drugs (NSAIDs) for the

Figure 6 75-year-old patient complaining about sagging skin around the mandibular line 15 years after face-lifting. Treatment with 2.5 ml Perlane per side with 25 Pix'L cannula.

References
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first few days, and dietary supplements such as vitamin E and omega-3 fatty acid. Furthermore, the patient should avoid sporting activities, sauna or sun bathing for 48 hours after treatment to lessen the risk of over-proportional swelling. No facial treatments such as lymph drainage, massage, dermabrasion, and strong chemical peeling should be carried out. Some after-treatment creams, such as Recover Cream or Eye Concentrate, can support the swelling and effectively calm the skin in the sensitive oculofacial region. Eye Concentrate in particular supports the production of collagen from fibroblasts, epithelialisation, angiogenesis, and microbial killing by increasing the oxygen levels in the skin. This results in an increase in both collagen and extracellular matrices.

The patient is allowed to wear concealing make-up after the first week of treatment. Mild swelling around the periorbital area and after lip augmentation may continue for a number of weeks. It is also possible that the patient will experience some numbness of the face for a few hours owing to the mixture of NASHA with lidocaine.

Hyaluronic acid together with the use of neurotoxin products provides a treatment which offers more visible results than many others, but is still a minimally-invasive procedure. Fillers such as hyaluronic acid are playing an increasing role in plastic-aesthetic and dermatological practice, complementing the use of laser and other procedures in skin rejuvenation. With the trend towards less invasive and non-permanent alternatives to plastic surgery, the use of injectable filler materials for facial rejuvenation and the correction of soft tissue defects is becoming increasingly popular. The less aggressive, less invasive and more gentle treatment achieved using the Soft Lift restores beauty in a much more natural way than any minimal procedures which have gone before.

Conclusions
Hyaluronic acid moisturises and provides fullness, while botulinum toxin affects the facial muscles and minimises downward movement. The effect is natural, and the Soft Lift does not appear artificial or overdone, with the result being a fuller and smoother face. The face is still the same, but younger looking, more rested and vibrant. The Soft Lift concept combined with the use of a PXL cannula is a minimally-invasive procedure that can be carried out relatively quickly, is temporary, and is relatively affordable. It is an holistic approach to rejuvenate the face using already known materials and techniques (anterograde/retrograde techniques with the sharp needle), combined with a new, almost painless and more precise cannula.

Declaration of interest
none