

Facial Volumization with Fillers

Kyle K. Seo

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This book is dedicated to my children, Seongwon, Hyejune, and Yejin, who give me hope and motivation in life.

Preface

Aging of the face is not merely the result of wrinkling of the skin from age-related loss of dermal elasticity but more significantly due to the loss of continuity in the facial contour caused by the sinking and sagging of the face with age. Injectable fillers are youth-restoring in this respect as they serve not only to fill etched-in grooves and creases but also to plump up facial volume depressions and thus help restore the convexity and fullness of the face seen in youth. Indeed, injectable fillers together with botulinum toxin injections represent the two most essential tools in the esthetic practitioner's armamentarium of facial rejuvenation treatments. Today, injectable fillers have evolved beyond a rejuvenation tool for recapturing youth and have become a significant beautification tool for unlocking facial beauty. Based on the multifaceted three-dimensional assessment of the face, injectable fillers serve not only to reshape the facial contour when placed in the receded chin, sunken cheeks, and areas of facial asymmetry but also to enhance and beautify individual facial features, for example, by projecting the nose and plumping the lips. While soft tissue fillers have been customarily referred to as *dermal* fillers ever since collagen fillers first made their debut back in the 1980s, it might be high time they were referred to instead as *volume* fillers in light of their increasingly larger role and versatility as volume enhancers.

In these pages, I have attempted to provide a comprehensive A to Z guide to filler injection techniques for facial volumization which have been honed and refined over my 20 years of clinical experience with soft tissue fillers. The Asian face is inherently rounder and flatter compared to the Caucasian face. Within the Asian demographic, this has created a desire for and popularity of various volumizing filler applications for adding definition and projection to the face, with augmentations of the forehead, nose, and chin being among some of the most highly requested indications. Notably, the cheeks are a common area for volumization in Korean patients, who aspire to have a baby-like face with full, chubby cheeks—a hallmark of the ideal *Korean look*, which a Caucasian patient may happen to find less appealing.

On top of this robust demand for facial volumization with soft tissue fillers, the Korean market for HA fillers is capable of supplying HA fillers at prices more affordable than anywhere else in the world due to the fierce competition among different brands. It is thus reasonable to conclude that this interplay between the supply- and demand-side factors puts Asia ahead of Western countries in terms of the sheer number of facial volumization treatments performed. As a testament to this buoyant trend, I have had the

pleasure of being recognized as “Asia’s Top Belotero® Injector” by Merz, Germany, for three consecutive years from 2018 to 2020. In 2019 alone, as it turns out, I used over 7000ml of Belotero® HA fillers in my practice. Besides Belotero, I also regularly use Restylane® and other local HA filler brands for treating between 20 and 30 patients per day, which translates into more than 5000 cases performed annually. The ten thousand hour rule popularized by Malcolm Gladwell famously dictates that it takes four hours of practice per day for ten years to achieve mastery in a given field. By this standard, I suppose I qualify as a master injector, considering I have been practicing injectable filler procedures for over 20 years, the recent ten years of which I have dedicated exclusively to botulinum toxin and filler treatments,

However, to reach this stage in my career, I admit numerous trials and errors have been made along the way. Several episodes come to mind. Back in 2000 when I had first started injecting fillers, fillers had yet to be used for facial volume replacement. Thus, when an elderly patient in her 70s presented for treatment of her severe nasojugal grooves, I applied the same approach I had typically used for treating the glabella frown lines, injecting only minimal amounts of HA filler superficially in the dermis and sub-dermis of the anterior malar, and was left to wonder why nothing was happening. Indeed I had my moments of highs and lows and everything in between during my years of practice with filler treatments. I recall how I almost leaped with elation upon learning hyaluronidase could be used to melt away irregularities from HA fillers and, conversely, how I agonized over the unexpected allergic reactions suffered by a patient after her hyaluronidase injections. There were also times when, for lack of knowledge, I resorted to antibiotics for treating a delayed-type hypersensitivity reaction related to BDDE or HA impurities, misunderstanding it to be an infection-related inflammation. Of course, as a practitioner I have also had my fair share of vascular complications from inadvertent intravascular injections of HA filler, though fortunately, none of these events ever escalated to disastrous skin necrosis. In fact, most of the HA filler-related complications described in this book are based on my own clinical experience. It is against this backdrop that this book was written, in the hope of providing fellow practitioners who are either just starting out on their practice with injectable fillers or who still lack the confidence in performing this procedure with the equivalent of a Drivers Manual, and lay out the safe and effective treatment practices drawing on the trials and errors I confess to have committed in my practice while learning things from scratch.

The three key factors physicians typically consider when selecting a filler product are safety, longevity, and price. Among those, safety takes first priority as injectable fillers represent an extraneous substance introduced into the human body. While collagen stimulators or semipermanent fillers provide a better, more prolonged duration of effect, HA outperforms all other types of soft tissue fillers currently on the market in terms of its excellent safety profile. Not only does HA consist of the same substance naturally occurring in the human body, but it represents the only type of injectable filler reversible with the injection of hyaluronidase should problems occur. It is for this reason that I almost exclusively use HA fillers in my practice and why this book also primarily describes the use of HA fillers.

Meanwhile, Asians and Caucasians differ both in their structural facial anatomy and the respective facial beauty standards they pursue, which should be appreciated when undertaking filler treatments. For example, the Asian face is wider and flatter compared with the more dimensional and narrower Caucasian face. This explains why a prominent zygoma and well-defined jaws are regarded as desirable beauty traits within the Western culture, while square jaw reduction with botulinum toxin are so popular among Asians who wish to slim down their broad faces. In the same context, while a midface augmentation in a Caucasian patient typically consists of increasing the lateral cheek projection to accentuate the coveted Ogee curve, such an approach is rarely practiced in Koreans as they tend to disfavor having a prominent zygoma. Conversely, whereas Koreans generally aspire to have a baby face with full plump cheeks, Caucasians tend to find such soft rounded features less appealing.

Such differences in ethnic esthetic standards are a constant theme running through many of the discussions contained in this book. I do accept, however, that a relatively larger portion of the book has been dedicated to strategies relevant to Asian patients, for which I seek the reader's kind understanding. That said, given that most of the available literature or publications dealing with the use of injectable fillers are written solely with the Caucasian patient in mind, this book may perhaps offer more balanced guidance, reflecting the facial aesthetic standards of both Asian and Caucasians and allowing practitioners to deliver adequately customized treatments tailored to the aesthetic needs of different ethnic patients. Driven by the strong influence of the Korean wave throughout many parts of the world via K-pop and K-drama, the Korean look has been established as a distinct and dominant feature of the Asian aesthetic standard. In some respects, therefore, the strategies laid out in the book may generally resonate with the broader Asian demographic who also favor the prevailing Korean beauty standard.

The injection techniques prescribed in this book are based not on the Consensus Data but instead on the specific approaches I actually employ in my own practice. In fairness, different doctors may hold different views on some of the points I cover. That notwithstanding, the effectiveness of the injection techniques presented in this book has been established based upon the extensive patient cases I have performed over the past 20 years and will be of relevance for those seeking some practical pointers in performing facial volumization with fillers. To the extent no single method can be upheld as absolute, however, I am more than happy to entertain any further input and constructive critique from respected colleagues reading this book,

While my primary motivation for writing this book was to put together an equivalent of a *Drivers Manual* to help other physicians navigate a safer and more pleasant journey through the complexities of volumizing filler treatments, part of the reason was also to give myself an opportunity to look back and take stock of the past 20 years of my career built mostly around injectable filler treatments. If my previous book "*Botulinum Toxin for Asians (Springer, 2017)*" published four years ago represented my first child, this work represents the second child I bring into this world, for

which I have both high expectations and corresponding concerns. Finally, it is my sincere hope that “Facial Volumization with Fillers” and, hopefully, its future 2nd and 3rd editions with updated and expanded information will continue to serve as a valuable and relevant source of current knowledge and insight on filler injection procedures for interested readers all over the world.

March, 2021

Kyle K. Seo
Seoul, Korea

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There are plenty of people who helped in bringing this book to fruition, whom I wish to recognize and acknowledge.

Words *cannot* express my feelings of gratitude for Ms. Sanhyo Kim, who was responsible for translating this book into the English language. As a conference interpreter, Ms. Kim has worked closely with me during the past 10 years as my English teacher, based on which she was able to accurately convey the subtlest of nuances in my original manuscript with exceptional flair. It was also her occasional prodding that helped keep my progress on schedule. I especially appreciate how she put this work before all her other commitments during the final weeks to allow timely completion of this book.

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A very special thanks indeed to Ms. Hye Won Hur, one of the greatest illustrators I could ever imagine working with, who truly took this book to the next level by enriching it with her beautiful and super accurate anatomic illustrations. Ms. Hur is a student of Prof. Kwan-Hyun Yoon of Incheon University and Representative of Mediart, who had been responsible for providing the illustrations contained in *Botulinum toxin for Asians* (Springer, 2017). Having obtained her degree as a Bachelor of Fine Arts, she is currently studying anatomy as a Ph.D. student at the Department of Orthodontics, Yonsei University. Judging from the phenomenal energy and brilliant ingenuity she demonstrated throughout the course of this project, I have no doubt in my mind that she is indeed a master in the making in the field of medical art illustration. *The student has become the master*, as the saying goes.

I would also like to express my sincere gratitude to Dr. Per Winlof of Galderma and Mr. Sin-Gu Lee (head of R&D center, JETEMA) for their invaluable insight and advice regarding HA filler manufacturing and filler rheology, topics on which the author cannot claim to be an expert. Their experience and support has been indispensable to preparing Chap. 2 Volumizing Fillers of this book, and any credit for the level of detail and perfection embodied in the said chapter should go to them.

Finally, I wish to give a big shout out to my amazing staff for their hard work in compiling the copious amounts of material and images accompanying the manuscript as well as contributing their photographs for inclusion in the book. I am forever in their debt.

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Kyle K. Seo

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About the Author



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He has worldwide reputation as an authority in the field of botulinum toxin and fillers. He was the first doctor in Korea to have launched a hands-on training course on botulinum toxin and fillers, namely the “Modelo Academy,” open since 2002. He has also published extensively on the areas of botulinum toxin and filler treatments including “Botulinum Toxin for Asians (Springer 2017)” and “Clinical Anatomy of Face for Botulinum Toxin and Filler Injection (Springer, 2016).” His extensive experience provided him many opportunities to lecture internationally on the subject of botulinum toxin and filler. In recognition of his exceptional dedication and prominent academic achievements, he was ultimately selected as the sole keynote speaker to rep-

resent the entire global cosmetic field at the plenary session of the 23rd World Congress of Dermatology (Vancouver 2015) and also chaired the botulinum toxin and filler session of the 24th World Congress of Dermatology (Milan 2019).

He also dedicated himself to promoting global academic activity in the dermatology society as the Vice President of the local organizing committee for the 22nd World Congress of Dermatology (WCD) (Seoul, 2011) and the Secretary-General of the local organizing committee for the 36th annual meeting of the International Society for Dermatologic Surgery (ISDS) (Seoul, 2015).



Pretreatment Assessment

1

1.1 Introduction

As with all other aesthetic procedures, the value of an individual approach cannot be emphasized enough in facial filler procedures. Delivering elaborately tailored treatment outcomes starts with a detailed assessment of the individual face, based on which a customized treatment strategy catering to the unique needs of each patient should be established. Factors to be considered during this assessment consist largely of subjective and objective appraisal of the face. Other relevant aspects including the sociocultural environment of the patient, ethnic aesthetic preferences, and gender-specific characteristics should also be broadly taken into consideration. This chapter outlines the approaches for identifying the patient's subjective aesthetic desires and expectations and covers the steps for undertaking an objective evaluation of a patient's face, including the assessment of facial shape, aging-related changes, facial symmetry, overall balance of proportions, profile view of the face, and dynamic expressions during facial animation. On this basis, the following pages explain how to formulate an individualized treatment plan which also comprehensively considers such other relevant factors as past medical history of cosmetic interventions, socioeconomic conditions, ethnic aesthetic ideals, gender-based differences, and budgetary considerations of the patient.

1.2 Individualized Assessment

During pretreatment consultations, it is important to establish the relevant patient factors that may potentially affect treatment outcomes. These include subjective, objective, sociocultural, and financial conditions as well as past medical history of aesthetic procedures. *Individualized treatment* in the truest sense can be delivered only by a treatment strategy that caters to the unique needs of the individual patient across each of these aspects.

1.2.1 Subjective Factors

Given the subjective nature of beauty, it is vital first and foremost to establish precisely what the individual patient perceives as a key aesthetic concern in his or her face. In other words, it is necessary to clarify the patient's main treatment goal and to make sure both the patient and practitioner are on the same page regarding this aesthetic goal. While some patients may be more concrete in articulating their exact aesthetic concerns down to the specific type of wrinkle they wish to have addressed, others may be more vague in their request and ask simply to have, for example, *a more youthful look* or *a softer appearance*. In this case, the practitioner is advised to dig deeper into the question and encourage the patient to specify their treatment priorities in more precise terms. This is because patients will not be pleased with the treatment outcome at the end of the day unless their initial presenting com-

plaints have been satisfactorily resolved even if positive improvements have been made in other respects. To this end, in my practice, I usually hold a mirror to the patient and ask them to pinpoint what it is exactly that bothers them about their faces (Fig. 1.1a). Such “mirror consultation” has the advantage not only of allowing the perceived defect(s) to be appreciated and expressed in richer detail but also of allowing the patient to realize any

other issues that they may have previously failed or neglected to notice and inspire them to seek solutions for those as well. Moreover, applying the spreading test or the compression test at this stage can further help the patient visualize the expected outcome post-treatment (Fig. 1.1b).

Having nailed down the treatment priorities, the next step is to manage treatment expectations regarding the treatment outcomes. This is crucial to optimum patient outcome as patients who have unrealistic expectations or the strictest standards are most likely to be dissatisfied with the result no matter how good it may in fact turn out to be. Indeed, ‘expectation management’ is an established field of study within the discipline of business administration, according to which the customer’s satisfaction with a product or service is said to be inversely proportionate to their level of expectation. This implies, assuming the goods or services concerned meet required quality standards, it becomes impractical to satisfy a customer whose expectation level is set too high. In aesthetic procedures such as injectable filler treatments, accurate communication of expected outcomes is absolutely key to managing patients’ expectations at levels achievable by the practitioner. In this regard, it is essential first and foremost, to lay down what the practitioner may or may not reasonably be expected to achieve with injectable fillers, so patients with unrealistic expectations may be guided in the right direction. For example, patients should be counseled beforehand that filling the tear troughs may not be of much benefit in case puffy eye bags are also present above the tear troughs. In this respect, visual representation is by far the most effective method for managing patient expectations. While sophisticated 3D imaging devices such as Vectra can be used to help patients visualize what they might look like *after* their treatment, in its absence, a mirror can be used as a simple method for simulating the postoperative results. A few useful tests or manoeuvres can be done during the mirror consultation to help patients foresee the results, such as the “spreading test” for deep glabella grooves or by pushing up the anterior malar fat to see if it corrects the tear troughs.

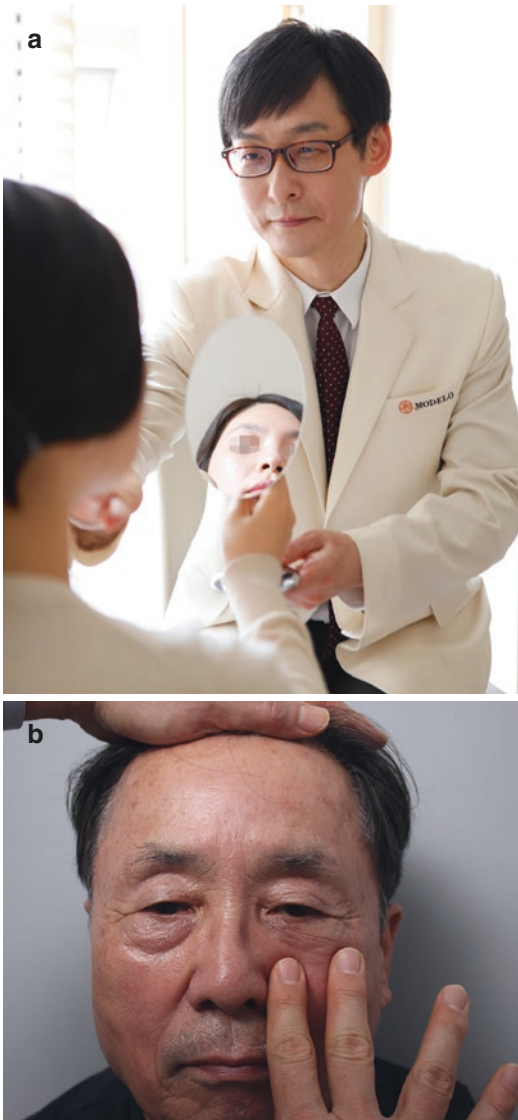


Fig. 1.1 (a) Mirror consultation, (b) An 72-year-old subject with bulging eyebags and tear trough is shown the simulated result after filler injection through mirror consultation

Episode: The Light in Your Eyes

If you assumed botox and fillers were simply the preserve of old people, given how they are used as near synonyms of “wrinkle treatment” you’d be surprised to learn how over the years, there has been a steady and notable growth of young people in their 20s and 30s opting for these treatments. Originally developed as anti-wrinkle treatments, botox and fillers have now evolved beyond their initial indication and have emerged as viable tools for purposes of facial beautification. Typical examples include masseter reduction with botox for facial slimming and the use of fillers for reshaping and recontouring the nose, lips, and chin. Rather than aimed at counteracting signs of aging, these treatments are focused on aesthetically enhancing and optimizing the congenital structural deficits of the face and body, for which, I suppose, there exists a ready market across demographics of all ages.

Obviously, the fact that the threshold age at which wrinkle-prevention starts has been lowered to the late 20s or early 30s also explains why the market for botox and filler is getting increasingly younger. As regards botox injections, they serve not merely as a quick fix for expression lines but upon repeat use offer the long-term benefit of keeping the face less wrinkle prone, as was already established worldwide some 10 years ago. As a matter of fact, when it comes to botox treatments, the younger you start, the better. Since young skin is naturally high in elasticity, wrinkles on a young face can be successfully tackled with botox alone. By the time you get to your 60s and 70s however, expression lines left neglected end up becoming deep static wrinkles permanently etched on the face like scars; the aging face also undergoes volume depletion and soft tissue ptosis, none of which can be satisfactorily addressed with the use of botox alone. Nonetheless, every now and then, I meet patients in their 40s and 50s who come

in for anti-wrinkle consultations and even after hearing out my explanation in full, decline to get botox until much later in life.

Understandably, undergoing an aesthetic procedure can be unnerving the first time around. After all, the image of having toxin, that is, botox, or a foreign material, that is, fillers, shot in the face is perhaps not the most comforting thought one can imagine. Some might feel uneasy about the prospect of having to rely on botox and fillers for the rest of their lives, given the temporary nature of these injectables and fret whether they might not be starting too early on. However, for those who refuse botox for reasons falling outside these vague concerns if not for financial considerations, I simply smile benignly and advise them to “Get started while you’re still young and pretty. Why hold out until you’ve become a granny?”

Personally speaking, I am at that stage in my life where I’m not getting any younger or fitter. If I’m getting any wiser though, I’ve come to realize the value of living for today. As the old Korean adage goes, *the reddest flower cannot last beyond 10 days and even a grasshopper has its own season*. It is a simple fact of life, just as the moon waxes and wanes and flowers bloom and wilt that nothing lasts forever including our transient youth and beauty. For all the euphemism about wrinkles being “the medals of our passage of life,” let’s face it; it is a basic human desire to stay forever young and beautiful if possible. Though we may never regain the vitality of fresh green spring leaves we once embodied as teens or recover the lusciousness of a blooming flower we radiated in our twenties, advances in modern medicine however have brought us the next best thing; the ability to continue looking our best and remaining elegantly beautiful even in our 40s and 50s, with proper maintenance and upkeep.

This year’s Baeksang Arts Awards for Best Korean TV Drama was awarded to Kim Hye Ja in honor of her overwhelming and

transformative performance in the drama series *The Light in Your Eyes* in which she played the role of a young woman in her 20s who suddenly finds herself bumped up to old age. Kim's exceptional performance which transcends generation to capture both the sweet innocence of a 20 something and the calm poise of an elderly woman, combined with a brilliant screenplay carrying a massive surprise ending, led the series to become a smashing hit with a peak rating of 9.7%. The series purports to be a fantasy drama about a young woman who is suddenly transformed into an elder due to some inexplicable circumstances which rob her of all her time; but it turns out—*spoiler alert!*—that the whole narrative all along had been one told by the old woman who in fact was suffering Alzheimer's disease.

The drama shed light on the preciousness of time and life, and a line from the final episode resonated in particular with many; "Don't let the regrets of yesterday or uncertainties tomorrow spoil your present. Live for today. Let the light into your eyes. This is your moment to shine. You deserve nothing less" And that is exactly what I remind myself at this very moment. May those dazzling words of wisdom guide us both in our lives and in removing our wrinkles. *Carpe diem* (May, 2019).

1.2.2 Objective Factors

An objective evaluation of a patient's face consists of a comprehensive assessment of the patient's biological factors such as gender and age, as well as the extent of facial aging as manifested by the lack of continuity in facial contour, characteristic of facial lines and wrinkles, visibility of pores, facial volume depression and sagging, and skin thickness and elasticity, among others. As with all other medical treatments, it is essential to define the problem correctly before finding the right solution, as an accurate diagnosis is the first

step toward achieving a successful postoperative aesthetic result.

As such, prior to an injectable filler procedure, each face should be assessed individually to identify the characteristics and aging changes specific to the patient's face. On this basis, it should be determined whether the patient is the right candidate for the filler treatment, whether the procedure may not disrupt balance with the rest of the face, and whether combination with other treatment modalities should be considered. For example, deep glabella furrows cannot be satisfactorily erased with HA fillers alone but instead requires the adjunctive use of BoNT-A. Likewise, the sunken cheeks lateral to the nasolabial fold need to be filled concurrently during a nasolabial fold correction in patients with severely sunken cheeks, to create a confluent transition between these adjacent anatomical units.

1.2.3 Facial Assessment Flow Chart

As illustrated, a thorough and accurate assessment of the patient's face guides the artistry of injectable filler injections and represents the starting point for delivering elaborately tailored treatment outcomes. To this end, a step-by-step guide for analyzing the face can help ensure that all necessary objective factors are considered in a sequential manner. The flow chart in Fig. 1.2 has been drawn up to provide a visual illustration of the relevant steps to be performed. The first step of a customized facial assessment consists of facial shape analysis. With the oval facial shape defined as the aesthetic ideal, the other facial shapes are stylized into seven categories, including round, oval, square, pentagon, oblong, rectangular (or slender), and inverted triangle shapes (Fig. 1.3). After placing the face into the relevant category, the next step is to formulate the aesthetic strategy for bringing the face closer to the ideal oval shape. In square, pentagonal, rectangular, and round faces where the prominence of the masseter m. or temporalis m. is the underlying cause, combination treatment with BoNT-A is recommended for reducing the facial width. Meanwhile, in faces featuring a pronounced

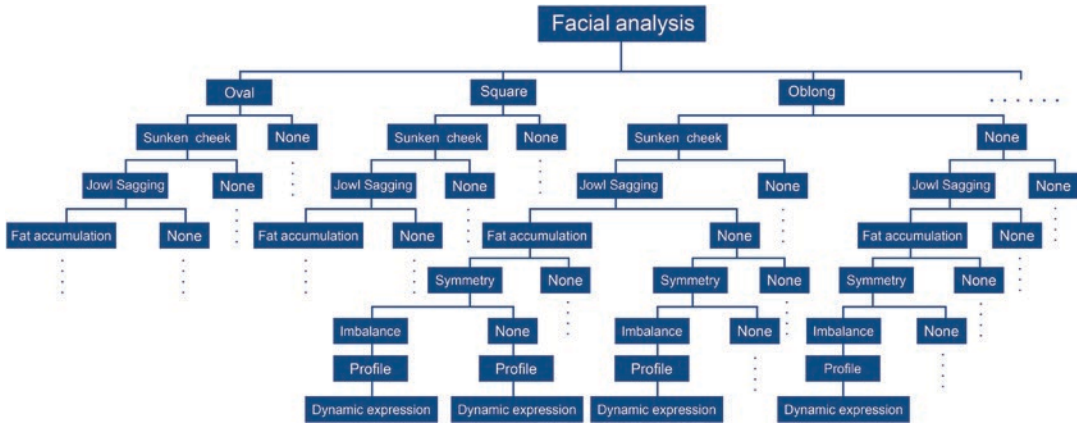


Fig. 1.2 Facial analysis flow chart

zygoma, while the bony zygoma itself cannot be reduced via injectable fillers, volume restoration simultaneously in the temporal and lateral cheek hollows can visually diminish the zygomatic emphasis by blending its superior and inferior borders with the lateral facial contour (Fig. 1.4). Volumizing the zygomatic arch and sunken cheeks in slender or inverted triangle faces not only helps to ovalize the face but also creates the illusion of a shorter facial length by adding facial width. Conversely, chin augmentation in round or square faces has the effect of slimming the face and bringing it closer to the ideal oval shape by adding the facial length (Fig. 1.5). While assessing the facial shape, it is also essential to consider the size of the face. It bears reminding in this regard that patients with a naturally large, voluminous face should be injected with conservative amounts only as injectable filler procedures serve primarily to add volume to the face.

The second step involves assessment of the aging changes present in the patient's face, including the appearance and extent of facial wrinkling, sagging, and depression, and clumping of facial fat (Fig. 1.6). Depending on the severity of such symptoms, combination with other adjunct procedures may be explored. For example, in patients presenting with pronounced jowl fat and jowl descent, volume correction of the sunken cheeks alone may exacerbate the heaviness of the jowls. In this case, the adjunct use of thread lifts or energy devices such as high-intensity focused

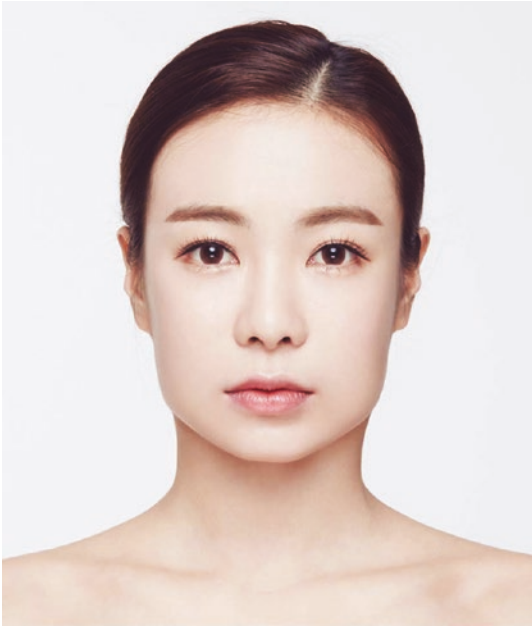
ultrasound (HIFU) or fat-reducing injections should be considered for lifting and tightening the sagging face (Table 1.1). By the same token, patients with under-eye bags presenting for tear trough correction should be advised to also seek surgical removal of the herniated infraorbital fat for optimum results.

In the third step, facial symmetry should be considered. Slight asymmetry is common in most people and may even contribute to a more natural-looking facial appearance. That said, those with more pronounced forms of facial asymmetry require adequate medical treatment, as such discrepancy can be aesthetically displeasing. While a definitive correction requires an orthodontic or even surgical interventions including upper and lower jaw surgery in severe cases, patients can also benefit from moderate cosmetic improvements with injectable fillers. Here, injectable fillers can be placed strategically to augment the weaker side of the face and to realign the canted maxilla/mandible to lie closer to the facial midline (Fig. 1.7).

The fourth step concerns facial balance. When it comes to facial aesthetics, the whole is greater than the sum of its parts. A face with the most stunning and prominent eyes, nose, and mouth may detract from beauty if each feature is not congruent with each other. It is for this reason that assessments should be performed regarding the relative size and position of individual facial features and the proportionality of the facial contour to determine the overall balance and propor-



Fig. 1.3 The facial shape analysis. Oval, round, square, pentagon, oblong, rectangular, and inverted triangle shapes



Oblong



Slender



Inverted Triangle

Fig. 1.3 (continued)



Fig. 1.4 A pronounced zygoma can be camouflaged by volume restoration simultaneously in the temporal and lateral cheek hollows leveraging optical illusion

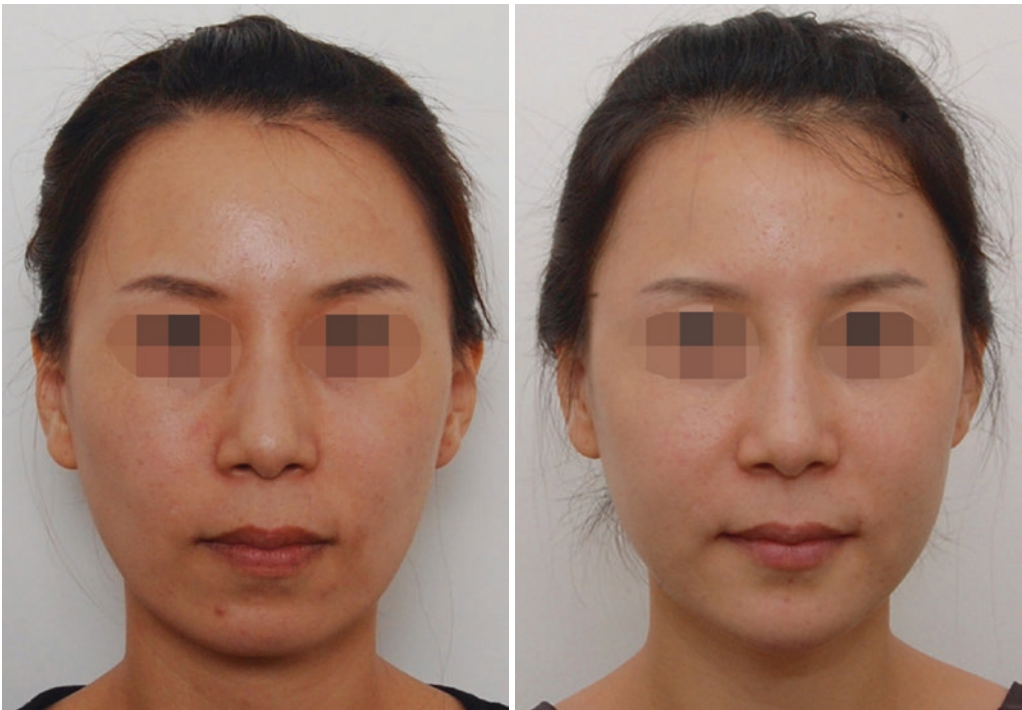


Fig. 1.5 Chin elongation with filler injection can bring about a slimmer V line in U-shaped face



Fig. 1.6 Aging pattern (a) in oval shape and (b) in pentagon shape

Table 1.1 Treatment recommendation for square shape face depending on the aging pattern

	Depression	Sagging	Fat accumulation	Recommended treatment
Square	None	None	None	FC_BoNT_A
Square	None	None	Yes	FC_BoNT_A, FRI or liposuction
Square	None	Yes	None	FC_BoNT_A, HIFU or thread lifting
Square	None	Yes	Yes	FC_BoNT_A, FRI, HIFU or thread lifting
Square	Yes	None	None	FC_BoNT_A, filler
Square	Yes	None	Yes	FC_BoNT_A, filler, FRI, (HIFU or thread lifting)
Square	Yes	Yes	None	FC_BoNT_A, filler, HIFU or thread lifting
Square	Yes	Yes	Yes	FC_BoNT_A, filler, FRI, HIFU, thread lifting

FC_BoNT_A facial contouring using botulinum toxin, *FRI* fat reduction injection, *HIFU* high-intensity focused ultrasound

tion of the face. For example, a face that has a disproportionately small mouth, as shown in the composite image, tends to look odd and out of balance (Fig. 1.8). Further, even where the size and shape of individual features remain attractively adequate, if one were to tip the balance of their relative positions by, for instance, narrowing the distance between the eyes or elongating the length of the philtrum, this can also diminish facial attractiveness (Fig. 1.9). Balance of pro-

portions is also important in assessing the facial contour. Altering the proportions of the facial contour by narrowing the width of the forehead or chin, or widening the facial width can distort the face and cause it to lose its proportional quality, even where the size and location of individual features remain intact (Fig. 1.10).

In the fifth step, the face must be assessed from the profile view. A side view of the face is particularly important prior to the augmentation



Fig. 1.7 Facial asymmetry can benefit from cosmetic improvements using injectable fillers. (a) Before and (b) after filler volumization



Fig. 1.8 A face that has a disproportionately small mouth, as shown in the composite image, tends to look odd and out of balance



Fig. 1.9 Imbalance of relative positions between individual facial features can diminish facial attractiveness



Fig. 1.10 Balance of proportions is also important in the facial contour. Altering the proportions of the facial contour by narrowing the width of the forehead or chin, or

widening the bizygomatic distance, can distort the face and cause it to lose its proportional quality, even where the size and location of individual features remain intact

of the forehead, nose, lips, and chin, as it gives the best view of the incline of the sloping forehead, presence of a nasal hump, protruded lips, receded chin, or protruded jaw, none of which may be immediately apparent on the frontal

view (Fig. 1.11). This assessment should form part of the decision-making process and inform, for example, that a chin filler is not indicated in a patient with a prognathia (protruding lower jaws).



Fig. 1.11 Recessed chin can be more accurately diagnosed by (a) front view and (b) profile view

The sixth step is to assess the face in animation and to observe the movement of facial muscles and the patient's dynamic expressions in action. It bears noting that in patients with a hypertrophic medial band of the orbicularis oculi m., the contraction of this band during smiling will cause the orbicularis oculi to protrude forward and become visible. In these patients, volume addition in the anterior malar may exacerbate the bulging of this band due to the bunching of the injected filler on muscle contraction. Such risks should be clearly communicated to the patient in advance or addressed with concurrent BoNT-A injection into the band (Fig. 1.12). Also, patients presenting with cheek dimples or whose cheeks tend to project laterally on smiling due to the partial insertion of the zygomaticus major m. into the skin (Fig. 1.13) may end up with cheeks that become puffy when they smile and stick sideways like the cartoon character Mr. Bogus (Fig. 1.14), as the injected filler is pushed out-

ward by the facial musculature. While it is important for practitioners to tactfully pick up on these features during patient consultation by observing the patient's dynamic expression during normal talking and smiling, it is also useful to ask the patient, where necessary, to animate their faces for a direct assessment.

1.2.4 Sociocultural Aspects

It is useful to gain insight into the sociocultural aspects of the patient, including their occupation, marital status, amount of downtime they can afford to set aside for a bruise or edema to subside, nationality, ethnic aesthetic ideals, and gender-based characteristics, all of which should form part of the treatment strategy. Appreciation of such factors would guide the practitioner, for example, that lower injection volumes are appropriate for a patient whose profession com-