

Chin and jawline augmentation: a frontier of aesthetic medicine



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The continuous development and adoption of minimally invasive modalities for improving facial contour and volume has led to an increased public interest in these methodologies, with the number of non-invasive procedures performed in aesthetic medicine outpacing surgical procedures in recent years: as an example, 13,281,235 aesthetic surgeries vs 2,314,720 non-invasive procedures were performed in the US alone in 2020 (Moradi et al, 2023). In 2021, research conducted by McKinsey & Company indicated that the global aesthetics injectables market could grow by 12–14% annually over the following 5 years (Leclerc et al, 2021); in 2024, 3 years into McKinsey's 5-year projections, it certainly seems that the use of minimally invasive cosmetic interventions is constantly growing, with 70% of consumers who took part in the 2023 American Society for Dermatologic Surgery's consumer survey stating that they were currently considering a non-surgical cosmetic procedure. This heightened interest in and usage of non-invasive cosmetic procedures has translated to the practice of jawline and chin augmentation. As in many areas of aesthetic medicine, social media has undoubtedly played a significant role in the increasing popularity of jawline and chin augmentation procedures; in 2023, the hashtag #snatchedjawline had more than 210 million views on TikTok (Marriott, 2023).

Chin augmentation aims to enhance the size or shape of the chin to address concerns such as an underdeveloped chin, receding chin or asymmetry, offering patients the opportunity to achieve facial balance and proportion; jawline augmentation complements chin augmentation by refining the contours of the jaw, creating a more

Abstract

The heightened public interest in and usage of non-invasive cosmetic procedures has translated to the practice of jawline and chin augmentation. Implants have historically been a cornerstone of chin augmentation; however, more recently, as non-invasive procedural techniques and modalities develop, questions have been raised as to whether there is still a need for implants. Francesca Ramadan explores the innovative options available to address even the most acute patient concerns.

Key words

► Chin ► jaw augmentation ► non-invasive ► dermal fillers ► fat grafting

sculpted and defined appearance (Derma Medical Clinics, 2024). The chin and jawline, although often overlooked in discussions of facial aesthetics, remain pivotal features that significantly influence overall facial attractiveness and maintain facial balance; adequate chin projection is traditionally associated with strength in the male jawline, youth in a female face, and a harmonious balance with the nose (Hartstein et al, 2020; Harris et al, 2024). Implants are a cornerstone of chin augmentation, with a long history of more than 100 years; however,



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more recently, as non-invasive procedural techniques and modalities develop, questions have been raised as to whether there is still a need for implants (Kalaaji and Jönsson, 2022). Below are some of the most widely available and applicable non-invasive modalities that may be efficacious in addressing patient concerns.

Dermal fillers

Dermal fillers are second only to botulinum toxin as the most popular non-invasive aesthetic treatments, with hyaluronic acid (HA) and calcium hydroxyapatite (CaHA and CaHA(+)) ranking as the most commonly used fillers (Moradi et al, 2023). Fillers are ideal for patients who seek a nonsurgical, temporary method to correcting an underdeveloped or receding chin and restoring volume loss, providing immediate results without the downtime associated with surgery and significant adverse effects. In a systematic review encompassing 917 patients who underwent HA chin augmentation, only two relatively major complications were reported; indeed, most patients were satisfied with the results, with the most common adverse events being local responses at the injection sites (swelling, bruising, pain, redness, and itching) (Ou et al, 2023). Efficacy is optimised by injection technique: in a retrospective, single-centre analysis of data from patients undergoing treatment of the lower third of the face with VYC-25L, a novel HA filler, a standardised grid-based approach was reported to be effective and safe, with high rates of patient satisfaction (Bertossi et al, 2021). Conversely, a dual-centre retrospective analysis featuring injection

locations identified based on the unique anatomical morphology of each patient's chin also demonstrated good results (Chen et al, 2022). In this study, the median volume of HA injected was 1.85 mL, with both needles and cannulas being used; the shape and contour of the chin was significantly improved in all patients immediately after injection, with most improvements being retained up to 6 months and partial improvements remaining visible for 12 months (Chen et al, 2022). No matter the technique, Moradi et al (2023) recommend, as general guidance, to avoid volumising the jowl fat compartment lateral to the mandibular ligament, as this will create heaviness, and treat the mandibular angle in the postjowl area, not just the prejowl sulcus, in patients with jowling. Management of patient expectations is crucial: treatment success and patient satisfaction are likely to be highest in patients with good skin quality and collagen-producing capacity, and an ideal mature candidate has some visible—but not excessive—jowling and a moderate—but not severe—loss of jawline definition (Moradi et al, 2023).

Fat grafting

Embracing the body's natural resources, fat grafting utilises a person's fat, harvested from areas like the abdomen or thighs, to augment the chin or jawline; through injection, the harvested fat should integrate seamlessly into the surrounding tissues, offering the advantage of natural-looking results and a minimal risk of rejection or adverse reactions (Derma Medical Clinics, 2024). In a prospective controlled study performed



Figure 1: chin augmentation

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to assess whether fat grafting increases chin volume and sagittal projection, and determine the magnitude and nature of the observed changes in 42 patients, all participants showed an increase in both evaluated outcomes at 4 weeks and 6 months post-intervention (Basile and Basile, 2017). Sagittal projection increased from 4 mm to 12 mm (average: 8.9 mm) and from 3 mm to 11 mm (average: 7 mm), and total volume increase ranged from 3 to 11 ml (average: 8 ml) after 4 weeks and from 3 to 8 ml (average: 7.4 ml) after 6 months (Basile and Basile, 2017). To maximise efficacy, using fat grafting in combination with other therapies may have potential. In a retrospective study pairing fat grafting and masseteric botulinum toxin injection, with a mean follow-up time after the final intervention of 20 months, the mean ratio of bigonial distance to total facial height improved from 0.599 ± 0.042 to 0.569 ± 0.024 ($P = .01$), closer to the predetermined ideal ratio of 0.561, and the mean ratio of upper lip length to lower lip and chin length improved from 0.611 ± 0.073 to 0.560 ± 0.065 ($P < .01$), nearing the ideal ratio of 0.542 (Chang and Kang, 2016).

Conclusions

As with many procedures performed in aesthetic medicine, there is a plethora of treatment modalities for chin and jawline augmentation available to both practitioner and patient, with more becoming accessible as time goes on. As ever, careful patient selection and consultation is critical, but there should be an option available to address even the most acute concerns. ◀IAN

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