

# A Single-visit Approach Using Fillers and Incobotulinumtoxin A: Full Face Enhancement in Asian Patients

Yates Y. Y. Chao, MD

**Summary:** A 3-dimensional, multi-layered approach combining modalities targeting different manifestations is recommended for achieving optimal esthetic outcomes. To date, studies reporting same-day treatment with dermal fillers and botulinum toxin have not been published. This article documents the practical use of a single-visit, pan-facial multimodal approach in addressing the varying esthetic needs of 8 Asian adults. The case series included male or female patients of varying age and degrees of facial fat, who received combination treatment with calcium hydroxylapatite filler, polydensified hyaluronic acid filler, and incobotulinumtoxin A in a single visit in August 2016 at a treatment center in Taiwan. Treatments were individualized based on the needs of each patient, according to guideline recommendations. The agents, with distinctive rheological properties indicated for different purposes, were applied sequentially across different facial tissue planes within a single visit. Patients were monitored for development of side effects after treatment. Photographs taken before treatment and 2 weeks after treatment were evaluated by the treating physicians. For all patients, treatment produced substantial improvements in all treated facial areas. Inherent morphological deficiencies in younger patients were addressed, age-related changes in older patients were corrected, and facial sexual dimorphism was enhanced in male and female patients. No major side effects occurred after treatment. This case series showcases the real-life implementation of a flexible, single-visit, multimodal approach that can be adapted for a variety of indications. (*Plast Reconstr Surg Glob Open* 2018;6:e1909; doi: 10.1097/GOX.0000000000001909; Published online 2 October 2018.)

## BACKGROUND

Morphological and structural deficits in the face are caused by an interplay of environmental, developmental, degenerative, and genetic factors, which affect different facial layers. A 3-dimensional, multi-layered approach combining modalities that target different manifestations across tissue planes is the standard treatment for achieving optimal esthetic outcomes.<sup>1-3</sup> Injection with dermal

fillers and/or botulinum toxin (BoNT) is the most popular minimally invasive esthetic procedure.<sup>1-3</sup>

Multiple-visits or single-visit treatment combining dermal fillers and BoNT is considered appropriate for most facial areas.<sup>1</sup> Although sequential application of these agents over separate visits have shown esthetic benefits,<sup>4,5</sup> patients require repeated visits and longer time to complete treatment. They may experience repeated downtimes due to injection-related side effects or partially completed esthetic outcomes when they return for treatment. In contrast, single-visit treatment can be completed within a day with lesser downtime. It is suitable for patients who prefer to complete their treatment quickly or are unable to comply with repeated visits. However, no studies evaluating same-day combination treatment with dermal fillers and BoNT have been published to date. This case

From the CHAO Institute of Aesthetic Medicine, Taipei, Taiwan.

Received for publication March 14, 2018; accepted April 23, 2018.

Some of the results of this case series were presented at the Taiwan Dermatology Aesthetic Conference (TDAC) 2017 in Taiwan and International Master Course on Aging Science (IMCAS) Asia 2017, Indonesia.

Copyright © 2018 The Authors. Published by Wolters Kluwer Health, Inc. on behalf of The American Society of Plastic Surgeons. This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal.

DOI: 10.1097/GOX.0000000000001909

**Disclosure:** Merz Pharmaceuticals GmbH provided the following medications used in this study: Radiesse<sup>®</sup>, Belotero Intense<sup>®</sup>, Belotero Balance<sup>®</sup>, and Xeomin<sup>®</sup>/Bocouture<sup>®</sup>. Dr. Chao received a study grant from Merz Asia Pacific Pte Ltd to conduct this case series. He is a scientific advisory board member, consultant, speaker, and trainer for Merz Asia Pacific Pte Ltd. The Article Processing Charge was paid for by Merz Asia Pacific Pte Ltd.

**Table 1. Overview of the Single-visit, Pan-facial, Multimodal-layered Approach: Properties, Indications, Treatment Areas, Injection Sequence, and Injection Depth of Each Aesthetic Agent**

	CaHA Filler (Radiesse®)	High-strength HA Filler (Belotero Intense® 26.0 mg/ml)	Low-strength HA Filler (Belotero Balance® 22.5 mg/ml)	Incobotulinumtoxin A (Xeomin®/Bocouture®)
Properties	High viscosity, high elasticity, and with collagen stimulating potency and strong supporting capacity <sup>6</sup>	Low viscosity, high cohesivity, high malleability, high plasticity, and with good tissue integration ability and moderate supporting capacity <sup>7</sup>	Low viscosity, high cohesivity, high malleability, good tissue integration ability, and soft consistency <sup>7,8</sup>	BoNT type A, free of complexing proteins, approved for softening glabellar frown lines; modulates the activity of mimetic muscles. <sup>9</sup>
Indications	(i) augmenting skeletal framework and bony shapes (ii) increasing definition and projection for sharper contours (iii) filling (deep tissue planes)	(i) providing moderate support for bony shapes (ii) enhancing facial definition and projection for softer contours (iii) filling fat compartments and soft tissues (deep tissue planes)	(i) smoothing surfaces (ii) filling fat compartments and soft tissues (superficial planes)	(On-label and off-label use) (i) facial contouring: blocking parts of mimetic muscles to bring about contour changes (ii) wrinkle reduction: modulating mimetic muscles to soften wrinkles (iii) facial lifting
Treatment areas*				
Injection sequence	1	2	3	4
	(i) Fillers first, then toxin (ii) Augment skeletal framework or bony shapes first, then augment volume, smoothen surfaces, and lastly modulate mimetic muscles for facial recontouring or lifting and wrinkle reduction (iii) Implanted into deep tissue planes first, then superficial ones, and lastly into the intramuscular or intradermal planes			
Injection depth	Supraperiosteal plane and subcutaneous layer	Supraperiosteal plane and deep fat layer	Intradermal and superficial fat layers	Intramuscular and intradermal layers

\*The esthetic agents, administered in different 3D planes, were not used on the same treatment area in the same tissue plane within a single patient. The choice of agent depends on the nature of effect desired in each patient.

series describes the clinical experience of a single-visit pan-facial approach combining calcium hydroxylapatite (CaHA) and hyaluronic acid (HA) dermal fillers with incobotulinumtoxin A for facial enhancement in 8 Asian patients with varying esthetic requirements.

### METHODS

This case series included male or female adult patients of varying age and degrees of facial fat, who received combination treatment with CaHA filler (Radiesse®; Merz Pharmaceuticals GmbH, Frankfurt, Germany), polydensified HA fillers (Belotero®; Merz Pharmaceuticals GmbH, Frankfurt, Germany), and incobotulinumtoxin A (Xeomin®/Bocouture®; Merz Pharmaceuticals GmbH, Frankfurt, Germany) using a single visit, pan-facial, multimodal-layered approach in August 2016 at a center in Taiwan. A combination of cannulas and needles was used for esthetic applications. The choice of injection equipment and the injection volumes for each agent were individualized based on patients' treatment goals, according to guideline recommendations.<sup>2,3</sup> Patients were instructed to report any side effects experienced

after treatment. Photographs taken before treatment and 2 weeks after treatment were evaluated by the treating physician. The case series was conducted in compliance with the principles of Declaration of Helsinki. Patients provided written informed consent before receiving treatment.

The single-visit multimodal-layered approach is presented in Table 1. The agents were administered according to the recommended sequence for single-visit treatment<sup>1</sup>: dermal fillers first, followed by BoTN. The agents, with distinctive rheological properties, were applied sequentially in a layered fashion to different 3-dimensional planes to address different indications: strengthening skeletal framework or bony shapes first, then augmenting volume, smoothing surfaces, and lastly modulating mimetic muscles for facial lifting and reducing wrinkles. CaHA or high-strength HA fillers was first administered into deep tissue planes, followed by low-strength HA fillers into superficial planes, and lastly incobotulinumtoxin A into the intramuscular or intradermal plane. The esthetic agents were not used on the same treatment area in the same plane within a single patient. The choice of agent depends on the nature of effect desired in each patient. CaHA filler with

**Table 2. Age- and Sex-specific Treatment Principles**

Treatment goals*	Male	Female
	Focus on: <ul style="list-style-type: none"> <li>strengthen bony shapes</li> <li>enhance facial definition and contours</li> </ul>	Focus on: <ul style="list-style-type: none"> <li>soften facial features</li> <li>improve facial contours and curves</li> <li>augment facial fullness</li> <li>smoothen transitions</li> </ul>
<b>Younger</b> Focus on: <ul style="list-style-type: none"> <li>improve facial definition and projection</li> <li>enhance facial proportion</li> </ul>	<i>Sequence</i> <ol style="list-style-type: none"> <li>CaHA filler: augmenting bony shapes and improving facial definition and proportion</li> <li>Incobotulinumtoxin A: facial contouring</li> </ol>	<i>Sequence</i> <ol style="list-style-type: none"> <li>CaHA filler or high-strength HA: improving facial definition, and proportion</li> <li>High-strength HA filler: filling soft-tissue compartments (deeper planes) and creating curves</li> <li>Low-strength HA filler: filling soft-tissue compartments (superficial planes), creating curves, and smoothing surfaces.</li> <li>Incobotulinumtoxin A: facial contouring and wrinkle reduction</li> </ol>
<b>Older</b> Focus on: <ul style="list-style-type: none"> <li>restore skeletal framework</li> <li>restore volume loss</li> <li>Improve skin quality</li> <li>Alleviate facial lines and folds</li> </ul>	<ol style="list-style-type: none"> <li>CaHA filler: augmenting framework support</li> <li>Low-strength HA filler: filling soft tissues and fat compartments (superficial planes)</li> <li>Incobotulinumtoxin A: facial contouring, wrinkle reduction, facial lifting</li> </ol>	<ol style="list-style-type: none"> <li>CaHA filler: augmenting framework support</li> <li>High-strength HA filler: providing moderate support for bony shapes</li> <li>High-strength HA filler: filling soft tissues and fat compartments (deeper planes)</li> <li>Low-strength HA filler: filling soft tissues and fat compartments (superficial planes), creating curves, and smoothing surfaces</li> <li>Incobotulinumtoxin A: facial contouring, wrinkle reduction, and facial lifting.</li> </ol>

\*Patients with a lean face required more soft tissue volumization, whereas those with a plump face required treatments to augment their facial definition and proportions and to smoothen transitions.

strong supporting capacity was used for building stronger and sharper contours, whereas high-strength-HA filler was used for providing a milder supporting role for creating softer contours and for augmenting soft tissues or fat compartments in deep planes. Low-strength HA filler was used for filling soft tissues or fat compartments in superficial planes and for surface correction. Incobotulinumtoxin A was used for facial reshaping or lifting and softening of wrinkles. Treatment was individualized according to the patient's age, sex, and other esthetic requirements according to guideline recommendations.<sup>2,3</sup> Age- and sex-specific treatment principles are presented in Table 2.

## RESULTS

This case series consisted of 8 patients: 2 each of younger males, older/middle-aged males, younger females, and older females. Plumper and leaner cases were included. Photographs taken before and after treatment were presented in **Supplemental Digital Content 1** (see figure, **Supplemental Digital Content 1**, which displays effects of the single-visit, pan-facial combination treatment, <http://links.lww.com/PRSGO/A866>). There were improvements in all treated facial areas and in the overall appearance for each patient after treatment, regardless of their age and sex. The esthetic needs of each patient were met. Apart from transient and mild bruising, pain, swelling, and tenderness at the injection site, no major side effects occurred after treatment.

## DISCUSSION

This article presents the guiding principles and practical use of a single-visit, pan-facial multimodal approach

developed based on published recommendations.<sup>2,3</sup> It illustrates the real-life application of a single-visit approach using CaHA and HA dermal fillers combined with incobotulinumtoxin A to address a range of esthetic indications in a spectrum patients consisting of male or female and young or aged adults with varying degrees of facial fat.

Previous studies demonstrated successful application of CaHA and HA fillers and incobotulinumtoxin A over separate visits to rejuvenate the entire face.<sup>4,5</sup> Cumulative improvements in esthetic outcomes were observed with the administration of each agent.<sup>7,8</sup> These findings demonstrate the importance of layering with agents of distinctive properties to achieve the desired outcomes, which could not be achieved by monotherapy.

This case series further demonstrated that the agents, administered in a layered fashion within a single session, worked synergistically to achieve an esthetically pleasing outcome for each patient, regardless of their age, sex and esthetic needs, with no major side effects. Improvements were noted within 2 weeks of treatment: inherent deficiencies in younger patients were corrected, age-related deficiencies in older patients were addressed, and facial sexual dimorphism was enhanced in male and female patients. Apart from injection-related side effects that were mild and transient, no unwanted diffusion of incobotulinumtoxin A or biofilm infection were reported after treatment.

## CONCLUSIONS

This case series demonstrates that CaHA and HA dermal fillers and incobotulinumtoxin A can be conveniently

applied within a single session to achieve full facial enhancement with minimal downtime. The single-visit multimodal approach could be a potential treatment option for patients who are seeking to improve their facial appearance but unable to comply with multiple visits.

**Yates Y. Y. Chao, MD**

CHAO Institute of Aesthetic Medicine  
3/F 8 Chin Chen St  
105 Taipei City, Taiwan  
E-mail: yateschao@gmail.com

## ACKNOWLEDGMENTS

*Editorial support was provided by Hui Hwa Choo of Tech Observer Asia Pacific Pte Ltd, Singapore and was funded by Merz Asia Pacific Pte Ltd.*

## REFERENCES

1. Sundaram H, Liew S, Signorini M, et al.; Global Aesthetics Consensus Group. Global Aesthetics Consensus: hyaluronic acid fillers and botulinum toxin type A—recommendations for combined treatment and optimizing outcomes in diverse patient populations. *Plast Reconstr Surg.* 2016;137:1410–1423.
2. Rho NK, Chang YY, Chao YY, et al. Consensus recommendations for optimal augmentation of the Asian face with hyaluronic acid and calcium hydroxylapatite fillers. *Plast Reconstr Surg.* 2015;136:940–956.
3. Wu WT, Liew S, Chan HH, et al.; Asian Facial Aesthetics Expert Consensus Group. Consensus on current injectable treatment strategies in the Asian face. *Aesthetic Plast Surg.* 2016;40:202–214.
4. Fink B, Prager M. The effect of incobotulinumtoxin a and dermal filler treatment on perception of age, health, and attractiveness of female faces. *J Clin Aesthet Dermatol.* 2014;7:36–40.
5. Pavicic T, Few JW, Huber-Vorländer J. A novel, multistep, combination facial rejuvenation procedure for treatment of the whole face with incobotulinumtoxinA, and two dermal fillers- calcium hydroxylapatite and a monophasic, polydensified hyaluronic acid filler. *J Drugs Dermatol.* 2013;12:978–984.
6. Loghem JV, Yutskovskaya YA, Philip Werschler W. Calcium hydroxylapatite: over a decade of clinical experience. *J Clin Aesthet Dermatol.* 2015;8:38–49.
7. Prasetyo AD, Prager W, Rubin MG, et al. Hyaluronic acid fillers with cohesive polydensified matrix for soft-tissue augmentation and rejuvenation: a literature review. *Clin Cosmet Investig Dermatol.* 2016;9:257–280.
8. Lorenc ZP, Fagien S, Flynn TC, et al. Review of key Belotero Balance safety and efficacy trials. *Plast Reconstr Surg.* 2013;132:33S–40S.
9. Alimohammadi M, Andersson M, Punga AR. Correlation of botulinum toxin dose with neurophysiological parameters of efficacy and safety in the glabellar muscles: a double-blind, placebo-controlled, randomized study. *Acta Derm Venereol.* 2014;94:32–37.