

LETTER TO THE EDITOR

Facial segmental lipoatrophy effectively treated with a deep priming filler incorporating calcium hydroxyapatite with results sustained for 12 months

1 | INTRODUCTION

Facial lipoatrophy describes the loss of adipose tissue without exudative reactions or appreciable fibrosis and manifests as flattening and depression of convex areas of the face. The cause often remains unclear. Etiological factors may include genetics, local trauma, aging, and idiopathic origins. Facial lipoatrophy's epidemiology differs, with HIV treatment being the most common cause. Conversely, idiopathic facial lipoatrophy is rare, typically occurring in healthy individuals. As far as we know, only five cases of idiopathic facial lipoatrophy have been reported.¹⁻⁶

A 5-degree scale, which includes tissue flattening and presence of muscular and bony protrusions, assesses the severity of lipoatrophy.³ Affected patients struggle with depression, social stigma, and low self-esteem. Managing this condition is challenging due to limited data on treatment efficacy and safety. Potential interventions include surgical and dermatological procedures like autologous fat transfer and soft tissue filler injections.^{1,4-6}

Calcium hydroxylapatite is the second most commonly used filler, promoting neocollagenesis for volume restoration, tissue lifting, and skin tightening. In this report, we describe a successful correction of facial segmental lipoatrophy using a filler composed of hyaluronic acid (HA) and calcium hydroxyapatite (CaHA), with excellent results maintained for 12 months.

2 | CASE PRESENTATION

A 40-year-old woman presented with a 6-year history of asymptomatic, asymmetric facial lipoatrophy, with no apparent trauma, infection, or family history of lipoatrophy. Autoimmune and viral investigations yielded negative results. Lipoatrophy stabilized after 7 months, greatly impacting the patient's quality of life.

Clinical examination revealed complete loss of middle and medial malar fat pads, resulting in temporal concavity extending to the lateral canthus and noticeable concavities in various facial regions, bony prominences, and underlying musculature. This presentation

corresponded to the 4th grade of facial lipoatrophy per the Facial Lipoatrophy Panel scale.

In our dermatology ambulatory, the patient underwent treatment using Vycross® hyaluronic acid (HA) filler following the MD Codes™ system. To minimize discomfort and distribute costs, we planned five treatment sessions, involving the injection of a total of 16 mL of HA filler at various soft tissue depths within the face.

However, post-treatment, the malar regions, especially on the left, remained excessively depressed. Subsequently, we administered a hybrid filler comprising hyaluronic acid and calcium hydroxyapatite (1 mL on the left and 0.25 mL on the right side). The outcome was highly satisfactory, with no reported side effects. No recurrences were in the 12 months since the last intervention, the patient maintained the results and remains under follow-up for potential future re-treatments [Figure 1](#).

3 | DISCUSSION

Facial lipoatrophy, the loss of facial fat, has an unclear etiology, possibly involving adipocyte dysfunction, apoptosis, and mitochondrial issues. It can be congenital or acquired, often linked to trauma, drug injections, or chronic illnesses. In HIV+ patients on HAART, lipoatrophy is an adverse effect. Patients may experience social stigma and seek medical intervention. Treatments encompass dermis-fat grafts, autologous fat transfer, and soft tissue filler injections (e.g., HA, calcium hydroxyapatite, poly-L-lactic acid, and collagen).^{1,3}

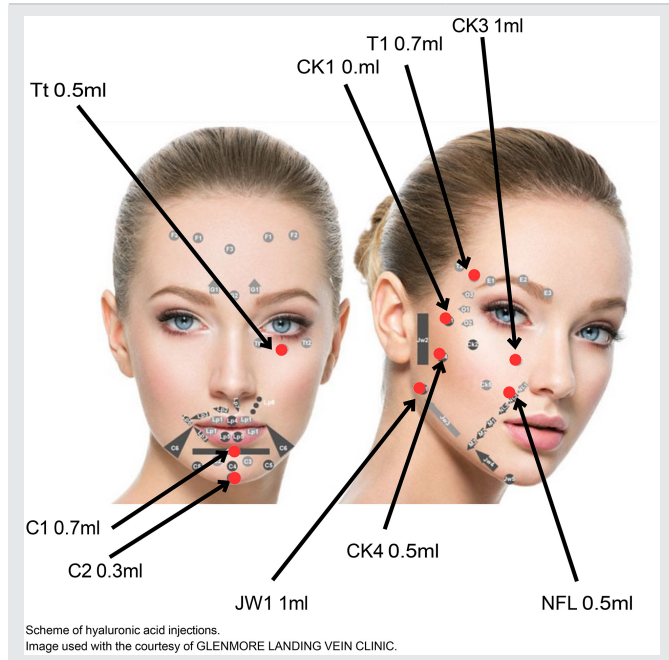
Five reported cases of idiopathic facial lipoatrophy exist, with four of them treated using autologous fat transfer.^{2,4-6} No prior publications exclusively describe hyaluronic acid (HA) and calcium hydroxyapatite filler treatment. This study presents its successful management in a 40-year-old woman using filler injections. Following initial full-face Vycross HA filler treatment per MD codes, the patient received a combination of HA and calcium hydroxyapatite, yielding a satisfactory outcome lasting a year [Table 1](#).



FIGURE 1 From the left: The patient before the treatment; the patient after Vycross HA treatment; the patient after treatment with HA and calcium hydroxyapatite.

TABLE 1 Treatment plan with Vycross* hyaluronic acid(HA) filler according to MD codes™ system.

MD codes	Product	Right side	Left side
CK1	VYC 20	0.1×3	0.1×3
CK3	VYC 20	1	1
C1	VYC 25	0.7	0.7
C2	VYC 25	0.3	0.3
T1	VYC 20	0.7	0.7
CK4	VYC 20	0.5	0.5
Tt	VYC 15	0.5	0.5
JW1	VYC 25	1	1
NLF	VYC 20	0.5	0.5



Autologous fat transfer, though effective, may necessitate re-treatment as absorbed fatty tissue diminishes.^{1,4} HA fillers can also lose volume over time. Combining calcium hydroxyapatite with HA could

result in prolonging treatment effects via collagen stimulation. This multiproduct approach offers an innovative perspective on lipoatrophy management, catering to patients who favor noninvasive options.

Treatment choice should be personalized, factoring in financial constraints, procedure availability, as well as underlying conditions. Although data on combined filler injections and fat grafting are lacking, it remains a potential avenue for future management strategies.

AUTHOR CONTRIBUTIONS

All authors were responsible for the concept and design of the study, collection and collation of data, analysis, and interpretation of data, write an article, reviewing this article, final reviewing this article and graphics performance.

CONFLICT OF INTEREST STATEMENT

All authors declare that they have no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT

All subjects gave their informed consent for inclusion before they participated in the study. The study was conducted in accordance with the Declaration of Helsinki.

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