

Isolated, Unilateral Lower Eyelid Mass Presenting as a Delayed Ocular Complication of Dermal Filler

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INTRODUCTION

With the increasing use of minimally invasive cosmetic procedures, including dermal fillers, ophthalmic complications associated with these treatments are becoming increasingly recognized.¹ We present a case of nontender, unilateral lower eyelid edema that developed years after dermal filler injection, which the patient had not disclosed at the initial evaluation. This case highlights the diagnostic challenge posed by the delayed presentation of a nonspecific symptom that may be attributed to several underlying etiologies.

CASE REPORT

A 64-year-old woman with a medical history of hypertension and an ocular history of dry eye presented with a 1-year history of left lower eyelid swelling. The swelling was neither painful nor pruritic and did not improve with warm or cold compresses. She had discarded her old makeup products and washcloths to identify a potential cause, without improvement. She also reported increasing strain in her left eye and questioned whether it was related to the eyelid swelling.

External examination revealed a prominent, protruding, soft, and slightly rubbery lower eyelid fat pad on the left (Figure 1). A similar finding was present on the right, although the herniated lower eyelid fat pad was less prominent. There was no proptosis or palpable mass along the orbital rim. Ocular motility and pupillary examination were normal. Slit-lamp examination and the remainder of the ocular examination were unremarkable bilaterally. The differential diagnosis included allergic reaction, insect bite, chalazion, hordeolum, preseptal cellulitis, orbital cellulitis, fluid imbalance, sarcoidosis, and lymphoma. The patient subsequently underwent an open biopsy of the left lower eyelid lesion. Intraoperatively, clear, granular, gelatinous material was identified within the subcutaneous tissue, orbicularis muscle, and postseptal space. Two specimens were obtained: the first consisted of orbital fat with associated gelatinous material, and the second consisted of subcutaneous tissue containing gelatinous material.

Histopathologic examination revealed no evidence of malignancy

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Figure 1. External photograph demonstrating left lower eyelid fullness.

and demonstrated fibroadipose tissue with acellular foreign material, suspected to represent dermal filler, in both specimens. At her 1-week postoperative visit for suture removal, the patient reported a history of Voluma® (hyaluronic acid; HA) filler injections to the mid-cheek 3 years earlier.

At the 1-month postoperative visit, the infraciliary incision was well healed, although some firmness persisted in the left lower eyelid region. We administered 1 mL of hyaluronidase, resulting in moderate improvement in the left lower eyelid swelling. Given the clinical response, close observation and surveillance were elected.

DISCUSSION

This case emphasizes the importance of maintaining a broad differential diagnosis when evaluating patients with lower eyelid masses. Common eyelid masses include chalazia, hordeola, epidermal inclusion cysts, hidrocystomas, and malignant lesions such as basal cell carcinoma, squamous cell carcinoma, sebaceous carcinoma, and malignant melanoma.² Given the increasing use of periorcular soft tissue fillers, complications related to these injections also should be considered in the differential diagnosis. According to the American Society of Plastic Surgeons, 6,219,152 (5,294,603 HA and 924,549 Non-HA) dermal filler procedures were performed in the United States in 2023.³ This figure reflects procedures performed by plastic surgeons and therefore does not capture the full volume of filler injections performed by other qualified clinicians. Multiple commercial filler materials are available for use in the periorcular region, with HA being among the most commonly used because of its favorable safety profile and

reversibility.⁴⁻⁶ Other materials include autologous fat, collagen, poly-L-lactic acid, and calcium hydroxyapatite.⁴ Our patient had previously received Voluma, an HA-based dermal filler designed for midface volumization. Voluma contains a combination of low- and high-molecular-weight HA and uses cross-linking technology that contributes to its durability, with clinical effects lasting up to 2 years.⁷

Ocular complications of dermal filler injections range from mild, transient effects to severe, permanent vision loss.^{5,8} These complications can be categorized as early or delayed based on their time of onset.^{6,8} Early complications include periorbital or eyelid edema, ocular pain, ptosis, and vascular occlusion, which can result in unilateral or bilateral vision loss.^{1,5,8} HA fillers can cause transient swelling because of their water-binding properties, although this typically resolves within several days.^{5,8} Persistent lower eyelid edema may occur when filler is placed too superficially or in excessive volume, particularly in the tear trough region.⁵

Delayed complications are less common but can present months or even years after filler injection. In a systematic review of 28 articles comprising 52 cases of delayed complications following tear trough filler injections, swelling was the most common complication, occurring in 20 cases, with an average onset of 14.8 months.⁹ Delayed unilateral swelling also may reflect an inflammatory nodule or granuloma. Such reactions typically present as firm subcutaneous nodules and may be associated with tenderness or other signs of inflammation.^{5,6} Histopathologic examination may demonstrate foreign-body giant cells and inflammatory infiltrates. The reported incidence of granuloma formation with modern HA fillers is approximately 0.01-0.1%.⁵ In contrast, our patient presented 3 years after filler injection with a unilateral lower eyelid mass without a discrete nodule or tenderness. Histopathologic examination demonstrated acellular foreign material without an inflammatory infiltrate or other evidence of a granulomatous reaction. These findings made a delayed inflammatory or granulomatous response less likely.

Filler migration, defined as the presence of filler material at a site distant from the original injection site, is another potentially delayed complication. Although HA fillers are biodegradable, filler material may persist and migrate to distant sites months or years after injection.^{10,11} Nathoo et al.¹¹ described three patients with filler material in locations

distant from the original injection site, including cases presenting with lower eyelid swelling or a noninflammatory mass. Similarly, Hamed-Azzam et al.¹⁰ reported seven cases of delayed orbital complications following facial dermal filler injections, including patients with lower eyelid swelling and painless lower eyelid masses. As in our patient, these cases demonstrate how delayed filler migration can mimic other orbital or eyelid pathology and lead to diagnostic uncertainty, particularly when the history of cosmetic filler use is not initially disclosed. Treatment of filler-related complications depends on the type and location of the filler and may include hyaluronidase for HA fillers, intralesional corticosteroids or 5-fluorouracil for inflammatory reactions, and surgical excision when conservative treatment is unsuccessful or the diagnosis remains uncertain.^{1,5,11}

CONCLUSIONS

This case highlights the importance of obtaining a thorough history and specifically asking about prior cosmetic injections and aesthetic treatments when evaluating patients with facial edema or new-onset orbital or eyelid masses. Patients may not consider previous cosmetic procedures relevant to their current ocular symptoms and therefore may not volunteer this information. However, a history of filler injections can substantially alter the differential diagnosis, guide appropriate diagnostic evaluation, and influence treatment. In this case, knowledge of the patient's prior HA filler injection might have raised the possibility of delayed filler migration earlier and potentially allowed an initial trial of hyaluronidase before surgical biopsy. Clinicians should therefore recognize that delayed filler-related complications can mimic more serious pathology and should be considered when evaluating unexplained peri-orbital swelling or masses, even when the original injection occurred years earlier and at a site distant from the presenting lesion.

REFERENCES

1. Alharbi MM, Bin Dlaim MS, Alqahtani JM, Alkhu-dhairy NS, Almasoudi SM, Alajmi NT. Ophthalmic complications of periorbital and facial aesthetic procedures: A literature review. *Cureus* 2023 Jul 1; 15(7):e41246. PMID: 37529817.
2. Lenci LT, Kirkpatrick CA, Clark TJ, et al. Benign lesions

of the external periocular tissues: A tutorial. 2017. <https://eyerounds.org/tutorials/benign-lid-lesions/index.htm>. Accessed June 15, 2026.

3. The American Society of Plastic Surgeons. ASPS Procedural Statistics Release. 2023. <https://www.plasticsurgery.org/documents/news/statistics/2023/plastic-surgery-statistics-report-2023.pdf>. Accessed August 14, 2026.
4. Foster J, Aakalu VK, Freitag SK, et al. Vision-threatening complications of soft tissue fillers: A report by the American Academy of Ophthalmology. *Ophthalmology* 2025 Aug; 132(8):935-944. PMID: 40167411.
5. De-Pablo-Gómez-de-Liaño L, Ly-Yang F, Burgos-Blasco B, Fernández-Vigo JI. Ophthalmological complications of aesthetic medicine procedures: A narrative review. *J Clin Med* 2025 Jul 31; 14(15):5399. PMID: 40807018.
6. Nagendran ST, Ali MJ, Dogru M, Malhotra R. Complications and adverse effects of periocular aesthetic treatments. *Surv Ophthalmol* 2022 May-Jun; 67(3):741-757. PMID: 33933438.
7. Hall MB, Roy S, Buckingham ED. Novel use of a volumizing hyaluronic acid filler for treatment of infra-orbital hollows. *JAMA Facial Plast Surg* 2018 Sep 1; 20(5):367-372. PMID: 29621374.
8. Hong GW, Hu H, Chang K, et al. Review of the adverse effects associated with dermal filler treatments: Part I nodules, granuloma, and migration. *Diagnostics (Basel)* 2024 Jul 30; 14(15):1640. PMID: 39125515.
9. Trinh LN, McGuigan KC, Gupta A. Delayed complications following dermal filler for tear trough augmentation: A systematic review. *Facial Plast Surg* 2022 Jun; 38(3):250-259. PMID: 34666405.
10. Hamed-Azzam S, Burkat C, Mukari A, et al. Filler migration to the orbit. *Aesthet Surg J* 2021 May 18; 41(6):NP559-NP566. PMID: 32887989.
11. Nathoo NA, Rasmussen S, Dolman PJ, Rossman DW. Periocular mass lesions secondary to dermatologic fillers: Report of 3 cases. *Can J Ophthalmol* 2014 Oct; 49(5):468-72. PMID: 25284105.

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