

LETTERS TO THE EDITOR

Reaction to dermal filler following COVID-19 vaccination

To the Editor:

During the ongoing COVID-19 vaccination campaign, there have been various cutaneous reactions reported in both clinical trial and post-trial data.¹⁻³ We recently encountered a remarkable clinical case of a cutaneous reaction after COVID-19 vaccination associated with dermal filler. Rare cases of cutaneous reaction associated with dermal fillers and COVID-19 vaccination have been reported and prompt to question why this reaction occurs and how to appropriately respond?

A 26-year-old woman experienced sudden chin enlargement approximately 24 h after receiving her second dose of Moderna COVID-19 vaccine (Figure 1A). The patient also reported slurred speech, paresthesia of the lower face, headache, and malaise. There were no symptoms or signs related to angioedema. The patient received her first dose of Moderna COVID-19 vaccine exactly 29 days prior without complications. Past medical history was significant for Juvederm Volux injection to the chin and jaw 3 years prior. The patient denied prior allergy to vaccines, drugs, and food. Otherwise, the patient's past medical history and surgical history were entirely unremarkable. The patient's swelling and symptoms gradually resolved over a 48-hour period (Figure 1B).

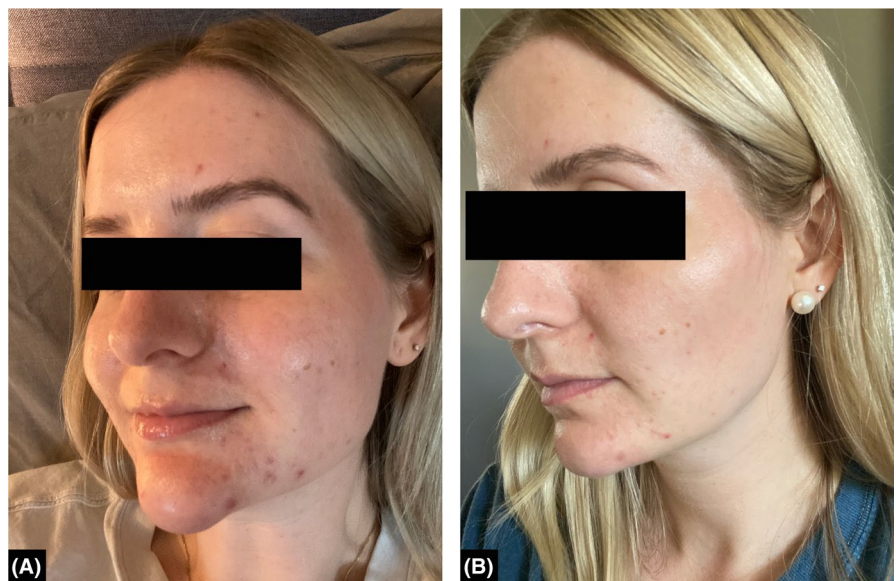
This brief clinical vignette showcases the localized dramatic and pronounced skin swelling associated with the Moderna COVID-19 vaccine and dermal fillers. This reaction is thought to represent a delayed-type hypersensitivity reaction to an immunologic trigger following COVID-19 vaccination.¹ Theoretically, hyaluronic acid-based fillers could act as adjuvants that enhance an antigen-specific

immune response, particularly in individuals with risk factors of previous vaccine reaction, allergy, or urticaria.⁴ New hyaluronic acid-based fillers can persist in facial structures from 2–5 years and have been suggested as a potential nidus for such a delayed inflammatory reaction (DIR), which has been reported to last between approximately 24 h and 3 weeks in different regions of the face.² Consistent with previously rare, documented cases, we do not have histologic findings to report as a skin biopsy was not performed due to the transient and aesthetically sensitive nature of this cutaneous reaction. Our case documents that this rare reaction can occur up to 3 years after dermal filler injection.

1 | CONCLUSION

Adverse cutaneous reaction associated with dermal fillers and the Moderna COVID-19 vaccine has rarely been reported.¹⁻³ This reaction can be striking and worrisome for patients and is important for physicians to consider this in the differential diagnosis for patients with facial swelling and a history of dermal filler treatment and COVID-19 vaccination. Previous cases of facial swelling were successfully managed using short courses of oral steroids; however, our patient's mild symptoms resolved without treatment.⁴ Ultimately, the benefits of COVID-19 vaccination greatly outweigh the minute risk of cutaneous delayed inflammatory reaction; however, all physicians should remain aware of this potential reaction and provide appropriate counselling to high-risk patients.

FIGURE 1 (A) Sudden dramatic menton swelling 24 h after Moderna COVID-19 vaccination in region of Juvederm volux injection 3 years prior and (B) resolution of menton swelling 48 h after onset



CONSENT FOR PUBLICATION

Obtained.

KEYWORDS

adverse drug reaction, COVID-19 vaccine, filler

CONFLICT OF INTEREST


The authors have no conflicts of interest to declare related to this work.

ETHICAL STATEMENT

Written informed consent was obtained from the patient, including accompanying images and medical history.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

Allison Osmond MD, MSc, FRCPC¹
Bret Kenny MEng² 

¹Department of Pathology and Laboratory Medicine,
Saskatchewan Health Authority, Saskatoon, SK, Canada

²Faculty of Medicine, Memorial University, St. John's, NL,
Canada

Correspondence

Bret Kenny, Memorial University, 300 Prince Philip Drive, St.
John's, NL A1B 3V6, Canada.
Email: bret.kenny@mun.ca

ORCID

Bret Kenny  <https://orcid.org/0000-0003-1768-0295>

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