# Using Intralesional Adalimumab for Chronic Refractory Cutaneous Granulomatous Inflammation

Houriah Y. Nukaly, MD; Siddharth Srikakolapu, MD; Dirk M. Elston, MD

Chronic localized granulomatous dermatoses present a therapeutic challenge, particularly in cosmetically sensitive areas where standard treatments often prove insufficient or intolerable. We describe a technique using intralesional injection of adalimumab to treat chronic refractory cutaneous granulomatous inflammation. This method highlights the potential of intralesional tumor necrosis factor (TNF) α inhibition as a targeted treatment option in refractory cutaneous granulomatous inflammation, offering localized efficacy while minimizing systemic exposure.

## Practice Gap

Chronic localized granulomatous inflammation can be difficult to manage, particularly when manifesting on the face. Intralesional corticosteroids may lead to atrophy and dyspigmentation and therefore must be used cautiously in cosmetically sensitive areas.[1] Surgical removal can lead to recurrence, and systemic agents may carry risks disproportionate to disease burden. Although tumor necrosis factor (TNF) α inhibitors are effective systemically, their localized use in cutaneous granulomatous dermatoses remains underreported.[1-3] We describe a technique using intralesional injection of adalimumab to treat chronic refractory cutaneous granulomatous inflammation.

## The Technique

A 69-year-old woman presented with a crusted erythematous papule with surrounding inflammation on the left nasal ala of 5 years' duration (Figure 1). Histopathology demonstrated a localized cutaneous granulomatous process. There was no clinical, radiographic, or laboratory evidence of systemic sarcoidosis. Infectious causes were excluded through negative tissue cultures and special stains, including auramine-rhodamine. Over a 3-month period following initial presentation, the lesion proved refractory to intralesional 5-fluorouracil, intralesional triamcinolone acetonide, pentoxifylline, N-acetylcysteine, and shave excision (Figure 2).

At 3-month follow-up, given the lesion's persistence despite local and systemic anti-inflammatory approaches and our intent to avoid repeated corticosteroid exposure or more aggressive surgery in a cosmetically sensitive facial site, we attempted treatment with intralesional adalimumab. A 40-mg/0.4-mL dose of adalimumab was withdrawn directly from a prefilled autoinjector and

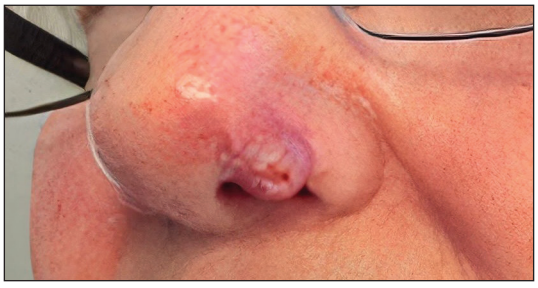

**FIGURE 1.** A crusted erythematous papule with surrounding inflammation on the nasal ala of a 69-year-old woman.

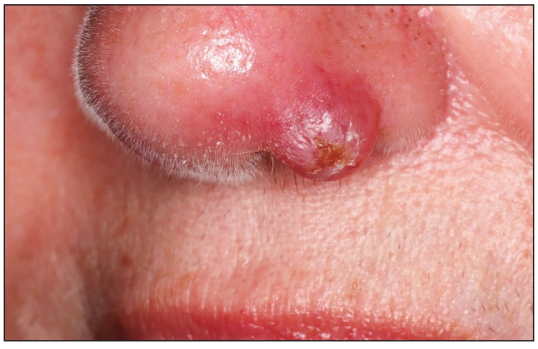

**FIGURE 2.** Three months after initial presentation, the lesion persisted despite use of intralesional 5-fluorouracil, intralesional triamcinolone acetonide, pentoxifylline, N-acetylcysteine, and shave excision.

Dr. Nukaly is from the Division of Experimental Medicine, McGill University Health Centre, Montréal, Québec, Canada. Drs. Srikakolapu and Elston are from the Department of Dermatology and Dermatologic Surgery, Medical University of South Carolina, Charleston.
The authors have no relevant financial disclosures to report.
Correspondence: Dirk M. Elston, MD, Department of Dermatology and Dermatologic Surgery, Medical University of South Carolina, MSC 578, 135 Rutledge Ave, 11th Floor, Charleston, SC 29425-5780 (elstond@musc.edu).
*Cutis.* 2026 June;117(6):191-192. doi:10.12788/cutis.1406

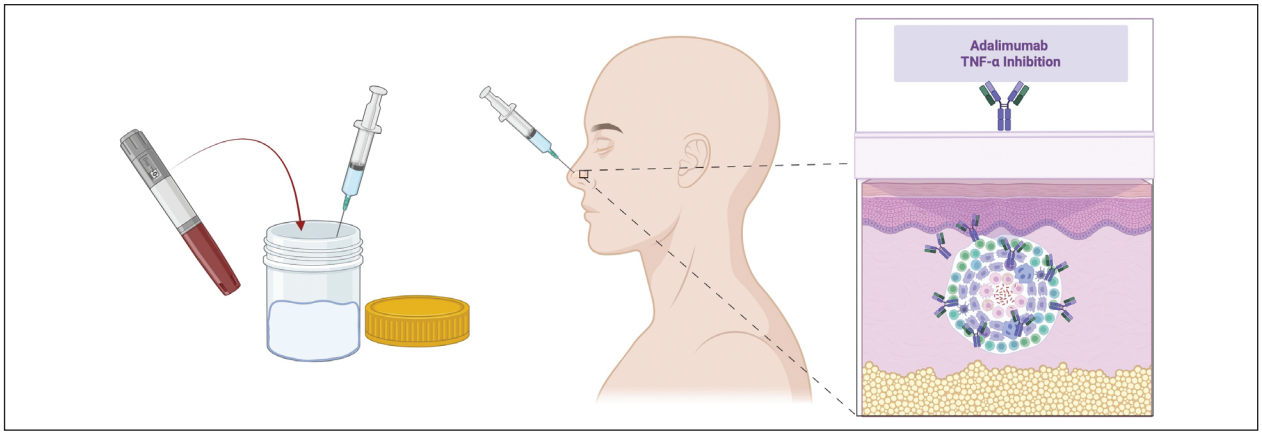


**FIGURE 3.** Illustration of the intralesional adalimumab injection technique. The contents of a 40-mg/0.4-mL adalimumab autoinjector were transferred to a sterile container, then the full 0.4 mL was drawn into a syringe and injected directly into the lesion on the left nasal ala. This method allowed for localized delivery of the tumor necrosis factor (TNF) α inhibitor with minimized systemic exposure. Image created using BioRender.

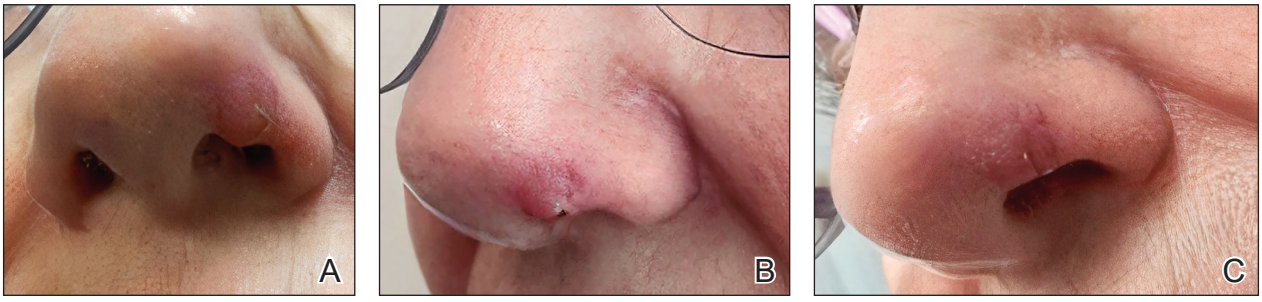


**FIGURE 4.** A, The lesion 1 month after the first intralesional adalimumab injection. B, After 9 months of serial injections, the lesion showed regression and improvement in nodularity. C, At 11 months after the initial injection and with the addition of daily doxycycline, the lesion exhibited visible flattening, softening, and decreased erythema and crusting.

placed into a sterile container, then transferred to a syringe fitted with a 30-gauge needle. Finally, the full 0.4 mL was injected intralesionally (Figure 3) until complete blanching of the lesion was achieved.

At 1-month follow-up, the lesion demonstrated decreased erythema and crusting (Figure 4A). The patient subsequently underwent 12 adalimumab injections over an 18-month period with marked reduction in size and erythema of the lesion without complications (Figure 4B). In addition, doxycycline 100 mg/d was started 11 months after the first adalimumab injection to address mild residual inflammation (Figure 4C); after 4 months, the dose was reduced to 50 mg/d due to gastrointestinal adverse effects. Doxycycline was maintained for 3 additional months with persistent improvement of the lesion.

## Practice Implication

Intralesional administration of adalimumab may represent a useful therapeutic option for localized refractory granulomatous inflammation, particularly in sensitive areas such as the face, where conventional therapies may be limited by adverse effects or suboptimal response. Localized delivery of TNF-α inhibition directly to the site of inflammation may allow for clinical improvement while minimizing systemic exposure associated with biologic therapy.[2] This approach may be particularly advantageous in cases in which repeated intralesional corticosteroid injections raise concern for atrophy or dyspigmentation, or when surgical intervention carries a risk for recurrence or cosmetic morbidity.[1,2] Given the established role of TNF-α in granuloma formation and maintenance, intralesional adalimumab provides a biologically plausible targeted therapeutic strategy. Further studies are needed to evaluate the potential applications in other cutaneous granulomatous dermatoses.[2,3]

## REFERENCES

1. Philips MA, Lynch J, Azmi FH. Ulcerative cutaneous sarcoidosis responding to adalimumab. *J Am Acad Dermatol*. 2005;53:917. doi:10.1016/j.jaad.2005.02.023
2. Balan K, Sagut P, Ederle AC, et al. Cutaneous sarcoidosis treated with intralesional adalimumab. *Int J Dermatol*. 2025;64:1120-1121. doi:10.1111/ijd.17549
3. Dunn C, Whitney Z, Foss M, et al. Intralesional certolizumab for refractory lupus pernio. *JAMA Dermatol*. 2023;159:890-891. doi:10.1001/jamadermatol.2023.0987