



Painful lumps in the axilla

The location of these lesions and the odorous fluid that drained from them pointed to the diagnosis. The acne on the patient's back was another clue.

A 30-YEAR-OLD MAN presented to the clinic with a complaint of small painful lumps in his armpit. He stated that he initially experienced some itching and discomfort, but after a while he noticed some red, tender, swollen areas. He also mentioned an odorous yellow fluid that would sometimes drain from the lumps. Since first noticing them 2 years earlier, he reported that the nodules had disappeared and reappeared on their own several times.

On physical exam, several small red sub-

cutaneous nodules were present in the axilla and tender to palpation (FIGURE 1A). The patient also had comedonal acne on his back (FIGURE 1B). The patient's body mass index was 31, and he was a nonsmoker.

- WHAT IS YOUR DIAGNOSIS?
- HOW WOULD YOU TREAT THIS PATIENT?

Anisha Guda, MD;
Richard P. Usatine, MD
University of Texas Health,
San Antonio

usatine@uthscsa.edu

DEPARTMENT EDITOR

Richard P. Usatine, MD
University of Texas Health,
San Antonio

The authors reported no potential conflict of interest relevant to this article.

doi: 10.12788/jfp.0281

FIGURE 1

The 30-year-old patient had multiple inflammatory lesions of the axilla (A) and large open comedones on his back (B)



PHOTO COURTESY OF RICHARD P. USATINE, MD



Even when surgical excisions are performed, medical treatment is needed to prevent new lesions and recurrences.

Diagnosis: Hidradenitis suppurativa

The characteristic location and morphology of the lesions, along with the chronicity and odor, were critical in arriving at a diagnosis of hidradenitis suppurativa (HS).

HS is a chronic, inflammatory skin condition that normally manifests in areas of apocrine sweat glands, including the axilla, groin, and perianal, perineal, and inframammary locations.¹ It begins when an abnormal hair follicle gets occluded and ruptures, spilling keratin and bacteria into the dermis. An inflammatory response can ensue with surrounding neutrophils and lymphocytes, which leads to abscess formation and destruction of the pilosebaceous unit. Sinus tracts form between the lesions, and a cycle of scarring, fistulas, and contractures can occur.

In this case, the comedones from acne conglobata on the patient's back indicated a more global follicular occlusion disorder. The characteristic triad is hidradenitis suppurativa, acne conglobata, and dissecting cellulitis of the scalp—of which the patient had 2.

Other potential causes of the pathology include abnormal secretion of apocrine glands, abnormal antimicrobial peptides, deficient numbers of sebaceous glands, and abnormal invaginations of the epidermis.² Increased levels of tumor necrosis factor alpha and other cytokines have been detected in HS lesions and are a potential target for therapy.

■ **The prevalence of HS** in the United States is approximately 0.1%.³ The condition typically begins between the ages of 18 and 39 years. The ratio of women to men affected by the condition is 3:1.² There is no evident racial or ethnic predilection. There is an association with diabetes and Crohn disease.³ Obesity and smoking are risk factors.¹

The differential includes an array of common skin conditions

The differential diagnosis in this case included carbuncles, cysts, acne, and abscesses.

■ **A furuncle or carbuncle** can result from an infection of hair follicles that can manifest as individual (furuncle) or clusters of (carbuncle) red, painful boils. They form on parts of the skin where hair grows, including the face, neck, armpits, shoulders, and buttocks. They

respond well to treatment with antibiotics and incision and drainage. They can be recurrent but usually don't cluster together in apocrine-rich areas, as seen with HS.

■ **Epidermal inclusion cysts** are keratin-filled inclusion cysts with epithelial-lined cyst walls. The cysts are subcutaneous and occasionally more superficial. They can occur almost anywhere but are most often found on the back, scalp, neck, face, and chest. They are usually solitary; however, when there are multiple cysts, they are not linked by sinus tracts as found in HS.

■ **Inflammatory acne lesions** tend to form on the face, neck, back, chest, and shoulders, while HS lesions appear most often in apocrine-rich intertriginous areas.

■ **Skin abscesses** are local deep infections of the skin caused by bacterial pathogens. The most common agent is *Staphylococcus aureus* (frequently methicillin resistant). Injection drug use and immunosuppression are risk factors. Although bacteria do not cause HS lesions, bacteria can exacerbate HS through colonization.

No lab test needed to diagnose hidradenitis suppurativa

Diagnosis of HS is largely clinical and based on a patient's history and physical exam findings.² No specific laboratory test is needed.

Although the patient in this case did have comedonal acne on his back, the lesions that prompted his visit were in an apocrine-rich area, were recurrent, and broke open on their own to release foul-smelling contents—all typical characteristics of HS.

Treatment depends on the severity of the condition

There are 3 stages of HS: Hurley stage I involves abscess formation without tracts or scars. Hurley stage II involves recurrent abscesses with sinus tracts and scarring. Hurley stage III has diffuse involvement with multiple interconnected sinus tracts and abscesses across an entire area.² Our patient fits into Hurley stage III.

■ **Evidence-based treatment of mild disease** (Hurley stage I) includes topical

clindamycin 1% solution/gel bid or doxycycline 100 mg bid for widespread disease (Hurley stage II or resistant stage I).² Chlorhexidine and benzoyl peroxide washes are also often recommended.³ If a patient does not respond to this treatment or the condition is moderate to severe, then clindamycin 300 po bid (with or without rifampin 600/d po) for 10 weeks should be considered.^{4,5} In a randomized placebo-controlled trial that compared the efficacy of oral clindamycin vs clindamycin plus rifampin in patients with HS, both therapeutic options were statistically equivalent.⁵ One small, randomized controlled study of patients with mild-to-moderate HS showed that tetracycline 500 mg bid for 3 months resulted in fewer abscesses and nodules but was not superior to topical clindamycin.³

■ **If the patient doesn't show improvement** (Hurley stage III), then adalimumab is an option, as follows: 160 mg subcutaneously at Week 0, 80 mg at Week 2, and then 40 mg weekly, if needed.⁴ Adalimumab is currently the only FDA-approved treatment for HS. Infliximab by IV infusion can be effective in improving pain, disease severity, and quality of life in patients with moderate-to-severe HS.³ This patient was also a candidate for treatment with systemic retinoids (isotretinoin or acitretin), which could have helped both the HS and the acne conglobata.

■ **Intralesional steroid injections with triamcinolone** 10 mg/mL can reduce local pain and inflammation rapidly. Pain management is also critical, as HS is painful. First-line therapy includes nonsteroidal anti-inflammatory drugs, acetaminophen, atypical anticonvulsants, and serotonin and norepinephrine reuptake inhibitors.² Opiate analgesics may be needed for breakthrough pain in patients with severe disease.

Avoiding tight clothing, harsh products, and adhesive dressings, as well as using clear petroleum jelly, can prevent skin trauma and help with healing. Weight loss and smoking cessation are also associated with better outcomes.^{6,7}

If medical management fails ...

If there is no improvement with medical management, it may be time to consider local pro-

cedures such as unroofing/deroofing, punch debridement, skin-tissue-sparing excision with electrosurgical peeling, and laser excision. Incision and drainage may be necessary for acutely inflamed, painful abscesses but should not be routinely performed because lesions can recur.³

Referral to a plastic surgeon is necessary when patients are considering wide excisions of largely affected areas. Even when surgical excisions are performed, medical treatment is needed to prevent new lesions and recurrences.

■ **Our patient** was treated initially with oral doxycycline 100 mg bid and intralesional triamcinolone (10 mg/mL) in the most tender lesions. He was also provided with a prescription for ibuprofen 800 mg tid to be taken with meals. The family physician encouraged the patient to lose weight. The patient derived some benefit from treatment but continued to experience new painful lesions.

The physician prescribed oral clindamycin 300 mg bid at a follow-up visit to replace the oral doxycycline. When this failed, the patient was sent for labs to determine if he would be a candidate for adalimumab. When the screening labs were normal, a prescription for adalimumab was provided: 160 mg subcutaneously at Week 0, 80 mg at Week 2, and then 40 mg weekly.⁴

JFP

➤ **Hidradenitis suppurativa is painful, and thus, pain management is critical.**

REFERENCES

1. Napolitano M, Megna M, Timoshchuk EA, et al. Hidradenitis suppurativa: from pathogenesis to diagnosis and treatment. *Clin Cosmet Investig Dermatol*. 2017;10:105-115. doi: 10.2147/CCID.S111019
2. Ballard K, Shuman VL. *Hidradenitis Suppurativa*. StatPearls Publishing; 2021.
3. Wiperman J, Bragg DA, Litzner B. Hidradenitis suppurativa: rapid evidence review. *Am Fam Physician*. 2019;100:562-569.
4. Alikhan A, Lymch PJ, Eisen DB. Hidradenitis suppurativa: a comprehensive review. *J Am Acad Dermatol*. 2009;60:539-561. doi:10.1012/j.jaad.2008.11.911
5. Caro RDC, Cannizzaro MV, Botti E, et al. Clindamycin versus clindamycin plus rifampicin in hidradenitis suppurativa treatment: clinical and ultrasound observations. *J Am Acad Dermatol*. 2019;80:1314-1321. doi: 10.1016/j.jaad.2018.11.035
6. Hendricks AJ, Hirt PA, Sekhon S, et al. Non-pharmacologic approaches for hidradenitis suppurativa - a systematic review. *J Dermatolog Treat*. 2021;32:11-18. doi: 10.1080/09546634.2019.1621981
7. Alikhan A, Sayed C, Alavi A, et al. North American clinical management guidelines for hidradenitis suppurativa: a publication from the United States and Canadian Hidradenitis Suppurativa Foundations: part I: diagnosis, evaluation, and the use of complementary and procedural management. *J Am Acad Dermatol*. 2019;81:76-90. doi: 10.1016/j.jaad.2019.02.067