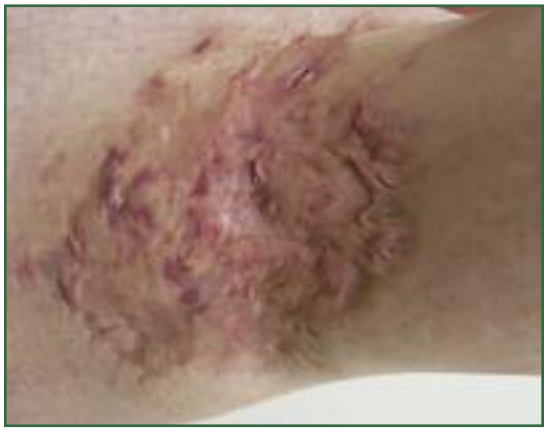
Scars Affecting the Axillae and Inframammary Areas

Neil Rehill, Senior Medical Student; Laurie Parsons, MD, FRCP(C)

A 21-year-old, Class III, obese male presents with a five-year history of multiple draining, painful sinuses and scars affecting the axillae, inframammary areas, groin, gluteal cleft, and buttocks. His medical history is unremarkable.



Scars Affecting the Axillae Inframammary Areas
Photo Courtesy of Dr. Laurie Parsons

What is your Diagnosis?

According to the Second International Hidradenitis Suppurativa Research Symposium, hidradenitis suppurativa (HS) is a "chronic, inflammatory, recurrent, debilitating skin follicular disease that usually presents after puberty with painful, deep-seated, inflamed lesions in the apocrine gland-bearing areas of the body, most commonly the axilla, inguinal, and anogenital region."[1]

The worldwide prevalence of HS is 1 to 4%. It is more common in younger adults (mean age 23 years), and it is three times more likely in women than men. There is no racial predilection for HS.

The accepted pathogenesis of HS begins with hyperkeratinization, which results in the occlusion of terminal hair follicles. The obstruction of the hair follicle is followed by its dilation and rupture, releasing its constituents (keratin, corneocytes, hair, sebum) into surrounding tissues. Epithelial strands from the ruptured follicles may form sinus tracts and fistulae. Bacterial infection and colonization are considered secondary pathogenic factors that can aggravate HS.[2]

Etiologically, several factors play a role in the development of HS. Between 30 and 40% of patients report a positive family history. The influence of hormones is closely linked, as HS is rarely seen in prepubertal or menopausal women, and the disease improves with pregnancy. Tobacco is a potential trigger, but the mechanism is debated. Higher levels of tumour necrosis factor alpha (TNFα), increased chemotaxis of polymorphonuclear leukocytes (PMN)s, and modified sweat gland activity, due to nicotine, may be at play. While it may not cause HS, obesity likely aggravates it due to proinflammatory factors released by adipocytes and the greater friction and mechanical stress caused by skin-to-skin contact in the intertriginous areas of obese individuals.

Management involves general modifications, such as reducing mechanical stress to the involved areas by losening body fat by wearing looser

clothing, being attentive to local hygiene, and smoking cessation. Surgical procedures involve unroofing, excision, and closure of areas that are failing to heal. Radical treatment consists of excision with skin grafts to close. Complications include disfigurement and poor healing of wounds.

Medical treatment consists of topical antibiotics (clindamycin 1% solution b.i.d. for 12 weeks), oral antibiotics (minocycline, doxycycline, cephalosporins, dapsone), and antiandrogens (ethinyl estradiol/drospirenone plus spironolactone, or finasteride 5 mg). Immunosuppressive treatment includes intralesional steroids or a short course of high-dose systemic steroids. TNFα-inhibitors show a dramatic improvement but not cure. Infliximab has been the most commonly used TNFα- blocker but treatment with adalimumab and etanercept is on the rise due to the ease of subcutaneous versus intravenous administration.[3]

References
1. Quotation taken from a presentation given at the Second International HS Research Symposium, which took place on Thursday, March 5, 2009.
2. Nazary M, van der Zee HH, Prens EP, *et al*: Pathogenesis and Pharmacotherapy of Hidradenitis Suppurativa. European Journal of Pharmacology 2011; 672(1–3):1–8.
3. Danby FW, Margesson LJ. *et al:* Hidradenitis Suppurativa. Dematol Clin 2010; 28(4):779–793.

Neil Rehill is a Senior Medical Student at the University of Calgary in Calgary, Alberta.

Dr. Laurie Parsons is a Clinical Assistant Professor of Dermatology at the University of Calgary in Calgary, Alberta.

cme