

Reactive Arthritis Associated With Hidradenitis Suppurativa

April L. Marquardt, MD; Kevin V. Hackshaw, MD

This is a case report of a man with chronic hidradenitis suppurativa who developed reactive arthritis. He presented with swelling and pain in his larger joints, along with conjunctivitis involving his right eye. These symptoms coincided with a flare of the hidradenitis suppurativa. His clinical picture and laboratory findings were consistent with a diagnosis of reactive arthritis. He was initially treated with prednisone, and later with methotrexate, with improvement in his symptoms. This case report is a discussion of a rare cause of reactive arthritis. A review of the literature regarding this condition is also included.

Keywords: bone ■ ophthalmic

J Natl Med Assoc. 2009;101:367-369

Author Affiliations: The Ohio State University Division of Immunology/Rheumatology, William Davis Medical Research Center, Columbus, Ohio.

Corresponding Author: April L. Marquardt, MD, The Ohio State University Division of Immunology/Rheumatology, William Davis Medical Research Center, 480 Medical Center Dr, Columbus, OH 43210-1228 (april.marquardt@osumc.edu).

A 49-year-old African American male with a past medical history significant for chronic, long-standing, hidradenitis suppurativa involving his axillary and inguinal regions presented to the rheumatology clinic complaining of pain and swelling of his left elbow, bilateral knees, and right ankle. Simultaneously, he began to develop conjunctivitis of his right eye. His joint symptoms were closely related to an exacerbation of the hidradenitis, which ultimately required surgical intervention. He denied any history of iritis, oral or genital ulcers, urethritis, bowel disease, or psoriasis that would suggest another cause of his symptoms.

Physical exam was notable for severe hidradenitis located in bilateral axillary and inguinal regions. The skin in these regions was thickened and fibrotic, with associated sinus tracts emitting purulent exudate, particularly in the inguinal region (Figure 1). There was a healing surgical scar present in the right inguinal region. Ocular examination revealed a nonexudative conjunctivitis of the right eye. Joint evaluation revealed small bilateral knee effusions without associated warmth. Soft-tissue swelling around the medial malleolus was

noted at the right ankle.

Laboratory studies revealed anemia of chronic disease and a Westergren erythrocyte sedimentation rate of 72 mm/hr. Serologic testing for rheumatoid factor, anti-CCP, and HLA B-27 were negative. Radiographic studies of the sacroiliac joints and lower lumbar spine revealed minimal degenerative changes (Figure 2). X-rays of the knees showed mild osteophytosis. X-ray of the right ankle revealed soft-tissue swelling.

A presumptive diagnosis of reactive arthritis secondary to hidradenitis suppurativa was made. He was initially placed on prednisone and responded well. After that was tapered, he was started on sulfasalazine, with recurrence of his symptoms. He was then started on 10 mg of methotrexate per week, and after several months of therapy, his symptoms improved.

DISCUSSION

Hidradenitis suppurativa is a chronic disorder of the apocrine sweat glands, characterized by comedolike follicular occlusion, chronic relapsing inflammation, and mucopurulent discharge. Progressive scarring and sinus tract formation are seen in later stages. It affects approximately 1% of the population.¹ The incidence is similar in both men and women, and an increased frequency is observed in African Americans.¹

Reactive arthritis is the triad of urethritis, conjunctivitis, and inflammatory arthritis. Typical infectious agents include *Chlamydia trachomatis*, *Salmonella*, *Shigella*, and *Yersenia* species as well as *Campylobacter jejuni*.² Many other infectious agents, however, have been described. Joint involvement is typically asymmetric and oligoarticular, predominantly of the lower extremities. The differential diagnosis includes septic arthritis, psoriatic arthritis, enteropathic arthritis, and rheumatoid arthritis.

Spondyloarthropathy associated with hidradenitis suppurativa and acne conglobata (a severe form of cystic acne), was originally described in 1982 in a case series of 10 patients.³ Ninety percent of these patients were African Americans in their third or fourth decade of life. All patients had a history of episodic oligoarthritis most commonly affecting the knees, followed by the elbow, wrist, ankle, and shoulder. All of the affected patients

also had clinical features of axial arthritis of the lumbosacral spine. The majority of patients had anemia and an elevated erythrocyte sedimentation rate. Eight of the 10 patients had radiographic evidence of sacroiliitis.

Subsequent studies revealed similar findings. Cutaneous manifestations often precede the onset of arthritis by as many as 20 years.⁴ Hidradenitis suppurativa/acne conglobata with arthritis is often associated with other clinical manifestations. Pyoderma gangrenosum, recurrent urethritis, conjunctivitis, and xerophthalmia have all been documented.⁴

Radiographic features include both axial and periph-

eral arthropathies. Involvement can be symmetrical or asymmetrical. Both the spine and sacroiliac joints can become affected. Sacroiliitis is a common finding in patients with acne conglobata and arthritis.⁵ Syndesmo-phytes and squaring of the vertebrae and calcification of the anterior longitudinal ligament have also been described. The axial skeleton is less frequently involved or occurs later, and is often asymptomatic in hidradenitis suppurativa.⁶ Peripheral joint involvement is more commonly seen in hidradenitis suppurativa, and has been predominantly characterized by erosions, periosteal reactions, and cystic changes of variable degree.⁶

Prior studies showed that the use of non-steroidal anti-inflammatory drugs was a reasonable treatment option.⁴ Steroids have also been used with variable success.

Methotrexate has not typically been used to treat arthritis associated with hidradenitis suppurativa, although it has been regularly used to treat other types of reactive arthritis.

The cause of arthritis associated with hidradenitis suppurativa/acne conglobata is unknown. There does not seem to be a genetic predisposition. These conditions are associated with chronic cutaneous infection, and the arthropathy occurring in these conditions may be reactive to the infectious process. However, no single bacterium has been consistently cultured from active skin lesions. Circulating immune complexes, including antinuclear antibodies, have been found in several patients. Elevated complement levels have also been noted to occur. This may, however, reflect a nonspecific reaction to inflammation and has also been seen in other

Figure 1. Minimal Degenerative Changes of the Sacroiliac Joint With No Evidence of Sacroiliitis



Figure 2. Skin, in Various Stages of Healing From Surgical Debridement, That Is Thickened and Fibrotic, With Associated Sinus Tracts Emitting Purulent Exudates



seronegative spondyloarthropathies, such as ankylosing spondylitis.⁷ Given that there is no clear genetic predisposition, this disease process may be a good model for the study of the role of the environment in the pathogenesis of inflammatory arthritis.

REFERENCES

1. Kelly, P. Folliculitis and the Follicular Occlusion Tetrad. Bologna JL, Jorizzo JL eds. 1st ed. Dermatology. London, England: Mosby; 2003:564-566.
2. Schumacher, HR. Reactive Arthritis. *Rheum Dis Clin North Am*. 1998;24:262-269.
3. Rosner IA, Richer DE, Huettner TL, et al. Spondyloarthropathy associated with hidradenitis suppurativa and acne conglobata. *Ann Intern Med*. 1982;97:520-525.
4. Rosner IA, Burg CG, Wisniewski, JJ, et al. The clinical spectrum of the arthropathy associated with hidradenitis suppurativa and acne conglobata. *J Rheumatol*. 1993;20:684-687.
5. Ellis BI, Shier CK, Leisen JJ, et al. Acne-associated spondyloarthropathy: Radiographic Features. *Radiology*. 1987;162:541-545.
6. Bhalla R, Sequeira W. Arthritis associated with hidradenitis suppurativa. *Ann Rheum Dis*. 1994;53:64-66.
7. Dacheva V, Dimov DM, Nedialkova V, et al. A comparative study of serum complement (C3 and C4) in inflammatory joint diseases. *Vutr Boles*. 1990; 29:68-74. ■

We Welcome Your Comments

The *Journal of the National Medical Association* welcomes your Letters to the Editor about articles that appear in the *JNMA* or issues relevant to minority healthcare. Address correspondence to EditorJNMA@nmanet.org.