Sexually Transmitted Diseases Presenting as Genital Ulcers

Janet N. Arno, MD

INTRODUCTION

Genital ulcer disease is important both because of its high incidence worldwide and because its management is often suboptimal and noninfectious causes such as Behçet’s, psoriasis, and fixed drug eruptions are not well known. This article will discuss only infectious causes of genital ulcer disease.

Global surveillance for genital ulcer disease was not done specifically before 2012. As a result, there are few estimates of worldwide prevalence, but efforts to collect data are under way. In 2008, the World Health Organization estimated that there were approximately 10.6 million cases of syphilis¹ and 400 million prevalent cases of genital herpes.² And, although there were an estimated 7 million cases of chancroid in 2001,³ many countries have reported significant decreases. By contrast, in the United States, genital herpes is the most common cause of genital ulcers, but in certain cities and certain populations, the incidence of primary syphilis is relatively high. This article reviews critical aspects of the management of sexually transmitted diseases that present as genital ulcers in the context of a series of cases with commentary.

CLINICAL PRESENTATION

Each of the genital ulcer syndromes is unique in its classic form, but nonclassic presentations are frequent. The most helpful diagnostic indicator is whether
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or not the ulcer is painful. Painful genital ulcers are found in genital herpes and chancroid, whereas syphilitic chancre and the ulcers of LGV and granuloma inguinale (caused by Klebsiella granulomatis [formerly known as Calymmatobacterium granulomatis]) are not painful. Granuloma inguinale is rare and will not be discussed further in this review.5

Genital herpes classically presents as a cluster of painful 1- to 3-mm ulcers an average of 4 days after exposure (range 2–12 days),6 but ulcers may be larger, single, separated, or confluent. Genital herpes may be associated with a prodrome of paresthesias and systemic symptoms including regional adenopathy, malaise, and headache. Other systemic manifestations may include a lymphocytic meningitis, or the infection may disseminate to cause more severe disease including hepatitis, particularly in immunosuppressed patients. Primary herpes simplex virus (HSV)-2 disease in patients with HSV-1 immunity may be less severe. Recurrent genital herpes is milder and usually not associated with systemic symptoms.

Syphilis is characterized by 3 phases separated by latent periods. Primary syphilis presents as a painless, nontender genital ulcer; the ulcer develops from a macule which progresses to a papule and then to an ulcer at the site of inoculation of Treponema pallidum, the etiologic bacterium. The ulcer typically is well circumscribed with a smooth base; it presents 10 to 90 days after exposure and resolves over a period of weeks. Secondary syphilis is a systemic illness which eventually resolves spontaneously. The patient then enters a latent stage, with manifestations of tertiary syphilis following years later. Neurosyphilis may occur at any time during the infection. Primary, secondary, and neurosyphilis manifestations may overlap.7

LGV-associated ulcers are usually missed by the patient. The lesion may appear as a papule at the site of inoculation, the primary stage, which resolves spontaneously. The secondary stage, a more likely time for the patient to present, is characterized by local progression of disease including proctocolitis with mucoid or bloody stool and regional lymphadenopathy. Lymphadenopathy may not be apparent in proctocolitis because of drainage pathways.8

SYPHILIS

CASE PATIENT 1

A 27-year-old white man is referred from his primary care physician with a 2-week history of a painless genital ulcer. The patient has been in good health all of his life with the exception of 2 episodes of rheumatic fever as a child. He was hospitalized during the second episode at age 8 years and was left with a residual murmur of mitral stenosis. During that admission, the patient was treated with penicillin and had no adverse reaction to it. The patient reports that he is monogamous with a male partner with whom he has been living for 2 years. The referring physician who saw the patient 10 days ago thought that the patient had syphilis, but the rapid plasma reagin (RPR) test she ordered was negative.

- What is the sensitivity of an RPR test in primary syphilis?

The patient’s presentation is highly suggestive of primary syphilis based on epidemiological and clinical grounds, as the referring physician suspected. In primary syphilis, the nontreponemal test can be negative up to 30% of the time9 and should not be relied upon to make the diagnosis. Although it is possible that the test was a false positive because of the prozone phenomenon, this is unlikely to be