Web Exclusive

Genital Ulcers: Could It Be Syphilis?

By Robert A. Gunn, MD, MPH, STD Control Officer

The answer to the above question ten years ago would have been "not very likely," since, at that time, syphilis was at near elimination levels in San Diego County. During the late 1980s through 1991, San Diego experienced a syphilis outbreak primarily among African Americans related to crack cocaine and prostitution, which peaked with 421 cases of infectious syphilis (primary or secondary stage) reported in 1988. Cases quickly subsided in 1992, and during the mid-1990s only 25 cases of infectious syphilis were being reported annually. In 1999, the CDC was confident that syphilis was on the verge of elimination and officially launched a campaign to accomplish this. However, Treponema pallidum, the spirochete bacteria causing syphilis, was not going to succumb without a fight.

TRENDS

Since 1997, syphilis began increasing among men who have sex with men (MSM) first in Seattle, followed by San Francisco, Los Angeles, and, finally, San Diego in the latter half of 2002. Since then, cases continue to increase in San Diego — provisional 2006 data indicate 232 reported primary and secondary (P&S) cases, which is up 20 percent from 193 reported in 2005, and overall up more than 700 percent since 2001. The majority (75 percent) of reported cases were MSM, and, among them, 56 percent were HIV positive. Drug use (41 percent), especially methamphetamine (27 percent), and a history of having multiple, often anonymous, sex partners (68 percent) are the risk characteristics of reported cases. Control of syphilis and other sexually transmitted diseases (STDs) is important because these infections facilitate the risk of transmission of HIV two to threefold.

DIAGNOSIS

How can practicing physicians help stem this outbreak? The hallmark of syphilis control is a biomedical approach: prompt identification, treatment, reporting, and partner services for persons with infectious syphilis. Primary syphilis is the most infectious stage and probably accounts for most transmission (secondary stage is also infectious if the patient has condyloma [moist, wart-like lesions in the genital area] or mucus patches in the mouth — both lesions contain numerous spirochetes). During the primary stage, which lasts approximately three weeks, the patient develops a painless, indurated, clean, solitary ulcer (classic syphilitic ulcer) that is teaming with transmissible spirochetes. This ulcer often goes unnoticed if it is in the anal, rectal, oral, or vaginal area. Females have contributed substantially to heterosexual transmission because of "occult" vaginal primary ulcers, and, likewise, among MSM, "occult" lesions in the anal, rectal, or oral cavity maintain a reservoir of silent transmissible infectious spirochetes. In addition, in an uncircumcised male, there is always a possibility that a primary lesion under the foreskin may go unnoticed. It is important to note that the classic presentation as described probably occurs less than 50 percent of the time. Syphilitic ulcers can be multiple, shallow, and sometimes painful.

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Currently, syphilis needs to be moved up on the list of potential causes of a genital ulcer(s) among MSM and any other patients, especially if they have had a history of prior STDs or have high-risk sexual behavior (information that should be routinely obtained from a sexual health risk assessment). The differential includes genital herpes, which is still the most common cause of genital ulceration, since it is a much more prevalent infection.

TREATMENT

Primary syphilis is a clinical diagnosis based on signs, symptoms, and risk factors. Laboratory confirmation is important, but not essential. T. pallidum can be identified in primary lesions by dark field microscopy, a tool that, though not readily accessible, is available in

the County STD Clinic. The serologic tests for syphilis (STS), such as an RPR or VDRL, are often non-reactive during the first four to seven days of a syphilitic ulcer, and, when reactive, the titer is usually low (less than or equal to 1:8). Clinical diagnosis warrants presumptive treatment with 2.4 million units of long-acting Benzathine penicillin (Bicillin LA). Bicillin CR is a different preparation and is not a recommended treatment (See CDC Treatment Guidelines 2006). For patients with HIV infection, some clinicians treat with 7.2 million units of Bicillin LA (2.4 million units, weekly, for three doses). For patients with a recent onset syphilitic ulcer and a negative RPR, it's worth repeating the RPR in one to two weeks, and often a sero-conversion occurs. Occasionally, early in the primary stage, the confirmatory test (TTPA, FTA, or EIA) is positive before the RPR becomes positive; therefore, ordering both tests can be helpful.

SEROLOGIC FOLLOW-UP

For persons infected with HIV, serologic follow-up is recommended at 3, 6, 9, 12 and 24 months. For non-HIV infected, a follow-up at 6 and 12 months is adequate. Patients usually show a decline in titer rapidly and ideally revert to non-reactive by 12 months, but some persons can remain reactive for many years (serofast). Failure to respond or a titer increase indicates the need for re-treatment and/or a cerebral spinal fluid examination to rule out neurosyphilis. Since the increase of syphilis has occurred among MSM who are HIV-infected, cases of symptomatic early neurosyphilis (NS) are being reported. Patients often present with cranial nerve dysfunction, especially with visual impairment (often unilateral) or decreased hearing, or with signs of subacute meningitis (headache, altered mental status), or rarely as a cerebral vascular accident. In San Diego, about 7–10 symptomatic early NS cases are reported each year.

SEX PARTNER TREATMENT

Prompt treatment of clinically diagnosed primary or secondary syphilis is critical to prevent transmission. In addition, sex partners also need to be promptly treated preventively. The incubation period from exposure to developing an infectious ulcer is approximately three weeks, but may be longer, so there is time to locate and inform partners about their exposure, and to recommend treatment. For partners, preventive treatment is indicated regardless of serologic test results, and waiting for STS results before treatment should not be done. It is actually most important to identify and treat sex partners before they have evidence of syphilis infection, and these persons will have a negative STS. The STD control program has well-trained investigators who can confidentially carry out partner services, and we ask treating physicians to encourage their patients with syphilis to cooperate with investigators so that prompt partner services can be provided.

COUNTY STD SERVICES

The County HIV, STD, and Hepatitis Branch operates STD clinics five days a week at the Health Services Complex and at other locations in Public Health Centers throughout the county (one to two days per week). Call (619) 692-8550 for hours and location. Patients can receive STD screening, STD treatment, HIV testing, and hepatitis B vaccination (based on risk), and the nominal fee ($15) can be waived if patients cannot pay. Clinicians with a question about syphilis or other STDs can call Robert A. Gunn, MD, MPH [(619) 692-8614, robert.gunn@sdcounty.ca.gov] or call the STD clinic and ask to speak to a nurse practitioner or physician on call. Cases can be reported by phone [(619)-692-8501], or by faxing [(619)-692-8543] or mailing a Confidentiality Morbidity Report (CMR) (STD Control Mail Stop, P511-D, 3851 Rosecrans Street, San Diego, California 92110). An STD/hepatitis update email is periodically distributed to clinicians (approximately four to five times per year). To add your name to the distribution list, contact Craig Sturak, (619) 692-8369, or fax, (619) 296-2607, or send an email to: craig.sturak@sdcounty.ca.gov . Copies of the Physicians' Bulletins (STDs) or STD Annual Fact Sheets can also be obtained by contacting Mr. Sturak.

KEY POINTS

- Syphilitic ulcers (primary stage), the most infectious stage, lasts three or more weeks.
- Syphilitic ulcers are usually painless and can pass unnoticed (occult lesions) if located in the oral, anal, rectal, or vaginal area.
- Syphilitic ulcer is a clinical diagnosis based on signs, symptoms, and risk behavior.
- Serologic tests are often non-reactive during the first four to seven days after onset.
- Presumptive treatment with long-acting penicillin (Bicillin LA) should be given if clinical suspicion is high. ■

SAN DIEGO COUNTY HEALTH STATISTICS

- Infectious syphilis (primary and secondary stage) has increased more than 700 percent since 2001 from 27 reported cases to 232 in 2006. More than 90 percent of cases are males, mostly among men who have sex with men who are often also HIV-positive.
- Gonorrhea has increased steadily since 1999, and rectal gonorrhea among males has increased more than 300 percent since 2000.

To request additional health statistics describing health behaviors, diseases, and injuries for specific populations, health trends and comparisons to national targets, please call the County's Community Health Statistics Unit at (619) 285-6479. To access the latest data and data links, including the Community Profiles and the 2004 Core Public Health Indicator document, go to www.sdhealthstatistics.com.

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