

## A RASH OF SYPHILIS

A MAN FROM New Jersey,\* spending some time in Oregon, developed a rash that persisted for several weeks. The rash was accompanied by what he thought were “hemorrhoids” and a “cold sore.” After a visit to a local bath house, where he had sex with a dozen anonymous partners, he sought medical attention at a Portland clinic. Unfortunately, he did not have hemorrhoids or herpes; the lesions were identified as condyloma lata; the cause: syphilis.

Syphilis is a sexually transmitted disease, and it is on the rise in Oregon. A complicated disease (see supplement, *verso*), lues—long known as the “Great Imitator,” and never as the “Old Man’s Friend”—has not been seen by most physicians practicing today. A little knowledge can help maintain an adequate index of suspicion.

Rampant in the first half of the 20th century, syphilis rates have generally declined sharply since World War II. In certain sub-populations, however, syphilis persists and sometimes flourishes. Rates increased sharply among gay men in the 1970s and early 1980s—before AIDS was recognized and public health campaigns against AIDS began to have an effect on the behaviors that can transmit both infections. In the go-go 90s, syphilis rebounded among heterosexuals trading sex for money or drugs. Rates were highest in large urban areas, particularly in the South, especially young black adults.

By 1999, the overall rate of primary and secondary syphilis had declined to 2.5 cases per 100,000—the lowest level ever reported.<sup>1</sup> These risks are not evenly distributed. The 1999 incidence among black Americans (15.2/100,000) was 30 times the rate reported among whites (0.5/100,000). Since then, infection rates have fallen considerably among black Americans (although still remaining relatively high). These declines have been outweighed in some areas by an increase in cases among men who have sex with men

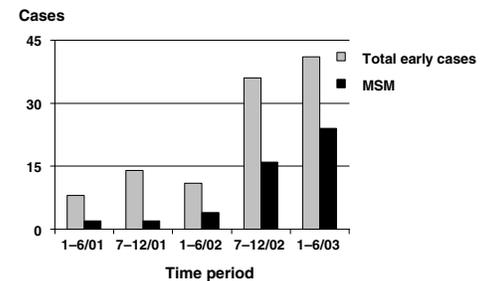
(MSM). In 1998 and 1999, there was an outbreak of primary, secondary, and early latent syphilis among MSM in the Seattle area.<sup>2</sup> This was followed by a similar outbreak in Southern California in 2000.<sup>3</sup> Since 2001, the overall rate of primary and secondary syphilis has been steadily increasing nationwide—largely driven by increases among MSM in selected, mostly urban, areas.

Although slow on the uptake, this trend hit Oregon in mid-2002. For many years, primary and secondary syphilis rates in Oregon had generally been well below the national average, falling from a 1988 high of 11.8/100,000 to below the national target level (0.4/100,000) in 1995, and remaining there for the next 7 years. Since 2001, though, case counts have steadily risen from only 13 that year to 29 in 2002 and already 24 by June 2003 (see figure, left).

Cases among MSM are driving most of the increase. A total of 20 cases among MSM were diagnosed in 2002, 18 of them Multnomah County residents. This trend has accelerated in 2003. Twenty-four new cases were diagnosed in the first half of the year—up 500% from 2002. Most of these patients are white, in the 35–45 year old age category, and again Multnomah County residents. About 60% of them are HIV-positive.

A key difference between this and previous surges is that most recent cases report having multiple, anonymous sex partners, and as a result cases can provide little or no useful identifying information. Not surprisingly, this complicates the ability of public health workers at county health departments to trace contacts and to identify and treat infected persons. The sometimes long delay between exposure and onset, not to mention diagnosis and report, doesn’t make this any easier either. A number of the cases report using the internet to meet partners in on-line “chat rooms,” using untraceable pseudonyms (not e-mail addresses).

Early syphilis cases, Oregon, 2003–2003



STD transmission patterns reflect behavioral patterns, and one must influence the latter to affect the former. Having multiple sexual partners increases one’s risk of infection with any number of STDs. It follows that reducing the number of sex partners reduces risk, all other things being equal. Latex shields for vulnerable areas also can reduce risk, though this strategy is far from foolproof. While there is no evidence that “anonymous sex” per se is any riskier than sex with identified partners, it is likely a marker for having multiple partners and for other behaviors that do increase risk.

If “safe sex” practices are becoming less prevalent among MSM, increasing HIV infection rates are likely to follow. The long and variable incubation period of AIDS and other HIV-related disease makes it difficult to monitor HIV infection rates directly. STD infection rates provide a surrogate measure of these rates, albeit an imperfect one.

### WHAT’S UP, DOC?

We would welcome any help that clinicians can provide in raising awareness of the risk of syphilis. A recent *CD Summary* article discussing HIV trends (June 17, 2003) provided information about taking a sexual history and counseling sexually active patients about ways to reduce the risk of acquiring STDs. In addition to diagnostic testing, we are now recommending that—during this epidemic—sexually active MSM (at least those with history of sex with anonymous and/or multiple partners) should

\* Name of state changed due to HIPAA paranoia.



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be screened for syphilis every 3–6 months.

Providers for HIV-positive patients should be particularly vigilant for syphilis, since in this group we have had multiple reports of a very rapid progression to neurosyphilis.

Links to information about diagnosis and treatment, including pictures too graphic for the CD Summary, are available on our web pages (<http://www.dhs.state.or.us/publichealth/std/index.cfm>) or

by calling your local health department. For symptomatic patients, dark field microscopy is an effective method to identify spirochetes in material from infectious sores, but is only available at specialized clinics (e.g., Multnomah County). Serologic assays are the mainstay of syphilis diagnosis. While a fearsome disease, primary and secondary syphilis infections readily yield to treatment with penicillin. For patients allergic to penicillin, doxycycline is the preferred alternative. STD treatment guidelines are readily available from public

health agencies (call or web search).

Syphilis (including any unconfirmed, suspected cases) is reportable: contact your local health department within 1 working day.

#### REFERENCES

1. CDC. Primary and secondary syphilis—United States, 1999. MMWR 2001; 50:113–7.
2. CDC. Resurgent bacterial sexually transmitted disease among men who have sex with men—King County, Washington, 1997–1999. MMWR 1999; 48:773–7.
3. CDC. Outbreak of syphilis among men who have sex with men—Southern California, 2000. MMWR 2001; 50:117–20.

#### A SHORT COURSE IN SYPHILOLOGY

Syphilis is caused by a spirochete, *Treponema pallidum*, that among pathogenic bacteria is most closely related to the agents of Lyme disease, relapsing fever, and leptospirosis. *T. pallidum* cannot be grown in culture.

The median incubation period of syphilis is 21 days (range, 10–90 days). Primary syphilis begins with the classic chancre at the site of inoculation. It starts out as a painless papule. The base is smooth, with raised, firm borders and, unless secondarily infected, there should be no exudates. It may be tender to the touch. There can be multiple such lesions, and atypical chancres occur in 60% of cases. Syphilis can also develop in the absence of a primary skin lesion. Lesions occur at the site of inoculation—typically the genitalia, mouth, anus, or buttocks. Oral and anal lesions are more likely to be secondarily infected. Lymphadenopathy is common.

The chancre generally heals spontaneously within 3–6 weeks (range 1–12 weeks). These lesions must be differentiated from herpes, chancroid, and traumatic, superinfected genital lesions. Unless congenital, syphilis is never vesicular, which differentiates it from herpes. The primary lesion of chancroid is painful, exudative, and bleeds easily.

Secondary or disseminated syphilis results from multiplication and dissemination of the spirochete, and typically begins 2–8 weeks after the appearance of the chancre—sometimes while it is still present. The most common signs of secondary syphilis are a rash that can be macular, maculo-

popular, papular, or pustular, or condyloma lata. Secondary syphilis typically includes generalized lymphadenopathy and purulence; other common symptoms include fever, malaise, pharyngitis, anorexia, and arthralgias. Oral and throat lesions such as ulcers or mucous patches occur in as many as 35% of cases. Genital lesions are less common at this stage, but some 20% of cases have either chancres, mucous patches, or condyloma lata. CNS abnormalities may include headache, meningismus, diplopia, decreased vision, tinnitus, and vertigo. Renal and gastrointestinal symptoms are uncommon, as is arthritis. Patients (and clinicians) should understand the both the lesions and the rash of secondary syphilis are contagious via contact with mucous membranes.

By definition, latent syphilis begins when the signs and symptoms of secondary infection disappear. Very few infections resolve spontaneously without treatment, although only (!) one-third of people with untreated latent syphilis develop the signs and symptoms of “late” or tertiary syphilis—and those usually years or even decades later. Spirochetes can damage any number of internal organs and tissues, including the brain, nerves, eyes, heart, blood vessels, liver, bones, and joints. Neurosyphilis is common, with signs and symptoms including ataxia, paralysis, numbness, gradual blindness and dementia, with a significant mortality rate. HIV-positive persons are at a greatly increased risk of developing neurosyphilis, which may present relatively early in the course of infection. Tertiary syphilis is generally not communicable, although pregnant women can pass the infection to their fetus, with potentially devastating results.