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Department of Health and Social Services
Joel Gilbertson, Commissioner

Division of Public Health
Richard Mandsager, MD, Director

Section of Epidemiology
Beth Funk, MD, MPH, Editor

3601 C Street, Suite 540, PO Box 240249, Anchorage, Alaska 99524-0249 (907) 269-8000
24-Hour Emergency Number 1-800-478-0084
http://www.epi.Alaska.gov

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Outbreak of Infectious Syphilis in Alaska—Follow-up

Introduction

Since our first *Bulletin* about this outbreak,[1] additional laboratory-confirmed syphilis cases have been reported to the Alaska Section of Epidemiology. The purpose of this follow-up *Bulletin* is to inform health care providers of the demographic characteristics of reported cases and newly identified clinically relevant findings among case-patients.

Outbreak Summary

During September 2004-March 2005, 16 new early syphilis case-patients were reported to the State Section of Epidemiology (SOE), of whom two (13%) had primary, nine (56%) had secondary, and five (31%) had early latent syphilis. One symptomatic case of neurosyphilis was diagnosed by reactive CSF-RPR and CSF-FTA in a secondary syphilis patient. Fifteen (94%) case-patients were male, of which 13 (87%) were men who have sex with men (MSM). The median age of case-patients was 37 years (range: 21-49 years); 13 (81%) were white, two (13%) were black, and one (6%) was Alaska Native. Case-patients were from the following regions in Alaska: Anchorage/Mat-Su (81%), Fairbanks (13%) and Southeast (6%). Ten (63%) case-patients were first tested at a sexually transmitted disease or Public Health Nursing clinic, four (25%) at a private medical clinic, one (6%) at an Alaska Native health facility, and one (6%) at a blood bank.

In addition to syphilis, the following sexually transmitted diseases (STD) were diagnosed among case-patients and/or their partners: chlamydia, gonorrhea, hepatitis B, hepatitis C, herpes simplex virus, human immunodeficiency virus, and human papilloma virus.

Prevalence of Selected STD Risk Factors

Five (31%) case-patients reported having anonymous sex; three (19%) met sex partners through the Internet. Alcohol, the most frequently reported drug, was reportedly used by 63% of case-patients, and methamphetamine, the most frequently reported illicit drug, was used/traded by 25% of case-patients.

Partner Notification

Public health disease intervention specialists interviewed all case-patients to identify additional persons at risk for infection. Seventy-one sexual contacts and suspected sexual contacts were named by case-patients (contact index = 4.4); 20 (28%) were female. As a result of these efforts,

- six of the 16 new syphilis cases were identified and treated;
- 41 people were found by exam/serology to be uninfected. Of these, 27 were treated because they were exposed to a case-patient during the period when that person was infectious, and 14 did not require treatment;
- 14 people named were previously identified and treated case-patients (some were named more than once); and
- 10 named partners are yet to be located.

Discussion

Although previously confined to Anchorage, this syphilis outbreak has spread to greater Alaska. Moreover, because source patients have not been identified for all case-patients in this outbreak, we believe additional case-patients currently remain unidentified.

Despite receiving recommended treatment, one case-patient in this outbreak developed neurosyphilis—a slowly progressive, potentially lethal infection of the central nervous system. The Centers for Disease Control and Prevention defines a confirmed case of neurosyphilis as syphilis of any stage in a patient with a reactive serologic test and reactive VDRL in cerebrospinal fluid (CSF).[2] Neurosyphilis treatment recommendations include:

- Aqueous crystalline penicillin G 18-24 million units a day administered as 3-4 million units IV every 4 hours for 10-14 days; or
- Procaine penicillin 2-4 million units IM daily, plus probenecid PO, 500 mg, 4 times per day, both for 10-14 days.

Success in treating neurosyphilis must be verified by following serological titers and appropriate CSF examinations every 6 months until CSF cell counts are normal.

One case-patient and 20 contacts/suspects identified during this outbreak investigation were women of childbearing age, indicating the potential for congenital syphilis, a medical emergency that occurs when the infection is transmitted from a pregnant mother to her fetus.

Recommendations

1. Health care providers throughout Alaska should be alert to risks for and symptoms of syphilis, and test for syphilis in patients who present with a clinically compatible history, particularly in MSM, female sex partners of MSM, and persons with HIV infection.
2. Providers should report suspected and confirmed cases of syphilis to the Section of Epidemiology immediately and encourage patients to fully cooperate with public health professionals so all partners and persons at increased risk can be appropriately tested and treated.
3. Providers should assess confirmed case-patients for resolution of symptoms and cognitive/sensory changes indicative of neurosyphilis, retesting for a fourfold (two dilutions) reduction in titer at 6 months.
4. Patients with syphilis and their sexual contacts should be thoroughly screened for other STDs.
5. All women of childbearing age that are diagnosed with syphilis should be immediately screened for pregnancy.
6. Providers should inquire about anonymous sexual encounters, illicit drug use and alcohol abuse in assessing their patients' STD risks.
7. Reports to the Alaska Section of Epidemiology should be phoned to the Rapid Telephonic Reporting System at 561-4234 (Anchorage) or 1-800-478-1700 (statewide) or sent by confidential fax to 561-4239.

References

1. Outbreak of Infectious Syphilis in Alaska. Bulletin 29; Dec. 2004. Available at: http://www.epi.alaska.gov/-bulletins/docs/b2004_29.pdf.

2. STD Surveillance 2003 Case Definitions. CDC. Available at: http://www.cdc.gov/std/stats/casedef.htm. Accessed on March 25, 2005.