



A Cluster of Ocular Syphilis Cases, Has the Bacteria Mutated?

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Untreated syphilis results in ocular syphilis, otosyphilis, and neurosyphilis, caused by *Treponema pallidum* infection of the central nervous system, inner ear, or eye. From March to July 2022, a cluster of ocular syphilis cases was found by public health officials in Michigan. Partner notification, case investigation, visiting public health clinics for treatment and diagnosis, publication of health warnings, sample collection for *T. pallidum* molecular typing, and hospital care coordination were public health responses. Five cases were found among women in southwest Michigan who all had a common sex partner (1). These cases were non-Hispanic white race, 40 to 60 years old, had no HIV, and had early syphilis. They were hospitalized and received intravenous penicillin. Their sex partner had early latent syphilis with no ocular syphilis. No additional transmission was detected after treatment of the common male partner. Because of no genetic material in limited samples, syphilis molecular typing was impossible. There is no report on the common heterosexual partner in an ocular syphilis cluster, suggesting that an unidentified *T. pallidum* can be associated with an increase in the risk for systemic manifestations of syphilis. A high index of clinical suspicion and complete sexual history is important for the diagnosis of otosyphilis, ocular syphilis, and neurosyphilis in all clinical settings (1, 2).

Syphilis transmission can be disrupted by coordinating disease surveillance with disease intervention specialist reviews and referral for treatment. Early diagnosis and treatment of syphilis are able to prevent systemic complications, such as permanent hearing or visual loss. Those at risk for syphilis should be assessed for auditory, visual, and neurologic symptoms. In addition, those with syphilis infection should undergo

a careful neurologic examination and be evaluated for auditory, neurologic, and visual symptoms. Those with syphilis and ocular complaints should receive immediate ophthalmologic evaluation. Any dysfunction in the cranial nerve should prompt a lumbar puncture and cerebrospinal fluid assessment prior to treatment, if possible (3).

According to the Centers for Disease Control and Prevention (CDC), a series of ocular manifestations of syphilis have experts questioning whether this rare finding indicates that the bacteria has mutated (1).

Coordination of disease surveillance with disease intervention specialists, case investigation, partner notification, and treatment referral can interrupt syphilis transmission. This is the implication for public health practice.

Footnote

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