Syphilis at age 15 years

Jacqueline Kaufman, BS^a, Bogar Garcia, MD^b, and Shawn Horrall, MD^b

^aEmergency Department, Texas A&M Health Science Center College of Medicine, Temple, Texas; ^bDepartment of Emergency Medicine, Baylor Scott & White Memorial Hospital, Temple, Texas

ABSTRACT

We present a case of a 15-year-old girl who presented with 1 month of worsening nonpruritic rash limited to her palms and soles. She had been treated twice for sexually transmitted infections. With her presentation of a nonpruritic rash on the palms and soles, a diagnosis of syphilis must be considered.

KEYWORDS Palmar rash; pediatric syphilis; syphilis

CASE PRESENTATION

A 15-year-old female presented with worsening nonpruritic rash on her palms and soles for 1-month duration. She denied any fever, pain, pruritus, dysuria, vaginal discharge, or previous vaginal sores. In the past year, she had been treated in the emergency department for gonorrhea/chlamydia and then again for trichomonas. She reported a total of 8 sexual partners since the age of 14 with occasional use of barrier protection. She is on Nexplanon for birth control and is up-to-date on her vaccinations. On exam, the rash is limited to palms and soles as shown in (Figure 1). Her ocular exam revealed a weak pupillary reflex to light with normal accommodation. The remaining neurological exam was unremarkable, including proprioception and Romberg's test. Pelvic exam did not reveal any lesions, lymphadenopathy, or discharge. A venereal disease research laboratory test was positive and confirmed by positive *Treponema pallidum* antibody test. Penicillin G intravenous was initiated due to concern for neurosyphilis. Ophthalmology's ocular exam did not reveal ocular findings of syphilis. A lumbar puncture was performed and was negative for neurosyphilis. Intravenous penicillin was then changed to intramuscular. She was then discharged with improvement at her 4-week follow-up.

DISCUSSION

In the United States between 2005 and 2013, the number of primary and secondary syphilis cases reported each year nearly doubled, from 8724 to 16,663. Additionally, men are contributing an increasing proportion, accounting for 91% of all primary and secondary syphilis cases in 2013. Race/ethnicity shifts occurred in 2009, with rate

increases most prevalent in black males shifting to a higher rate of increase in Hispanic and white men. Racial disparities still persisted, though, because the rate of increase in primary and secondary syphilis in black men remained 5.2 times that among white men. Among women, the rate of increase has been hovering between 0.9% and 1.5%, though the rate among black women was 13.3 times higher than that of white women.¹ Additionally, peak prevalence age groups have shifted to younger ages over the past 10 years. Syphilis rates are now highest in those ages 20 to 24 and 25 to 29 years rather than those ages 35 to 39 years.² The US Preventative Services Task Force and the American College of Emergency Physicians currently recommend screening high-risk populations such as patients with human immunodeficiency virus and young men (age under 29 years) who have sex with men.³ Furthermore, the incidence of congenital syphilis increased from 2012 to 2014 from 8.4 to 11.6 cases per 100,000 live births.⁴ If the average age of syphilis incidence has decreased, then we should consider syphilis in young adults and some adolescents.^{1,5,6}

The emergency department provides a unique position to identify and assist individuals at high risk for contracting syphilis. More research is necessary to determine the costs versus benefits of empiric screening in certain high-risk emergency department patients such as young men who have sex with men and patients with human immunodeficiency virus. For patients with suspected sexually transmitted disease, it is imperative to take a thorough sexual history to appropriately risk stratify them for syphilis. The incidence of syphilis appears to trend to a younger age than previously thought. Awareness of this trend and implementation of screening of high-risk

Corresponding author: Bogar Garcia, MD, Department of Emergency Medicine, Baylor Scott & White Memorial Hospital, 2401 S. 31st St., Temple, TX 76508 (e-mail: bogar.garcia@bswhhealth.org)

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Figure 1. Palmar (left) and plantar (right) rash as seen in our case of secondary syphilis.

patients in the emergency department may offer a benefit to previously underrecognized populations such as the case of this 15-year-old female.

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