

BRIEF ARTICLE

Syphilis in HIV Positive Individuals and the Importance of a Skin Exam: A Case Report

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ABSTRACT

Among HIV-positive patients, co-infection with syphilis is estimated to be as high as 20%. The diagnosis of syphilis is often missed due to its asymptomatic nature during its primary stages. A 68-year-old HIV-positive male presented with perianal lesions to his primary care physician twice. He was then referred to two different specialists before a proper physical exam was conducted after which he was diagnosed with otosyphilis and neurosyphilis. Physicians should have a higher index of clinical suspicion for syphilis in HIV-positive patients to allow for prompt diagnosis given the propensity of these patients to develop more severe neurological and ophthalmologic manifestations. This case highlights the importance of a thorough skin exam by a primary care physician when examining patients to allow for an earlier and accurate diagnosis and thus avoiding unnecessary referrals to specialists.

INTRODUCTION

Despite advances in screening, diagnosis, and treatment, the prevalence of syphilis has been at a near historic high during the past decade.¹ Early recognition of characteristic symptoms and treatment can curtail a larger outbreak from occurring. Typical primary syphilis is characterized by a single painless lesion in the anal or genital region that ulcerates to form a “chancre”. Progression to secondary syphilis occurs within two to eight weeks with appearance of a maculopapular rash that can involve the palms and soles. If progression to tertiary syphilis occurs, patients can develop severe complications such as gummas, aortitis, tabes dorsalis, and argyll robertson pupils.² Syphilis in HIV-infected patients often has an atypical presentation with higher rates of

asymptomatic primary syphilis and accelerated disease progression. Consequently, syphilis amongst HIV patients often goes undiagnosed until it has progressed to the secondary stage of disease.³ Secondary infection in HIV patients is more aggressive with increased rates of neurocognitive effects and ophthalmic involvement.⁴

CASE REPORT

A 68-year-old HIV-positive male presented with perianal painless erythematous lesions for a 6-week duration. (**Figure 1**). He denied a history of STDs or chronic diarrhea. Previous treatment with antibiotics showed no improvement. The patient went to his primary care physician twice before receiving a referral to a gastroenterologist to be

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evaluated with flexible sigmoidoscopy and biopsy. Pathologic evaluation showed significant acute/chronic inflammation and no malignancy. The patient developed further symptoms of tinnitus and headache and was treated with azithromycin with no improvement. The patient was then referred to an infectious disease specialist where a generalized morbilliform macular rash was observed. (**Figures 2 and 3**). An RPR yielded a positive result, and the patient was diagnosed with otosyphilis and neurosyphilis. The patient was admitted to the hospital and treated with 4 million units of IV penicillin G Q4 for 14 days.



Figure 1. Clinical presentation of painless erythematous perianal lesions.

DISCUSSION

Syphilis is known as “the great imitator” due to its ability to mimic a myriad of other diseases. The characteristic rash is non pruritic and often has a superficial scale on the lesions. This can result in misdiagnosis of psoriasis in some patients. Other differential diagnoses include pityriasis rosea, drug eruptions, lichen planus and acute febrile exanthems. Recognition of the unique palm and sole lesions and morbilliform rash seen in syphilis patients is crucial for early detection and treatment.¹ However, the

diagnosis is often not made until patients have already developed more severe complications. The recognition of the classic maculopapular morbilliform rash associated with syphilis is often not considered by physicians who do not have specialized training in evaluation of rashes.⁵



Figure 2. Characteristic maculopapular secondary syphilis rash on trunk.



Figure 3. Secondary syphilitic lesions on flank.

Although serologic tests are considered the mainstay of syphilis diagnosis,⁶ HIV-positive patients could experience serological failure

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such as the prozone reaction compared with HIV-negative patients.⁷ Therefore, clinicians must rely on a thorough history, physical exam, and high index of clinical suspicion to facilitate a diagnosis.⁸ Several cases of misdiagnosed syphilis in HIV patients have been previously reported which further emphasizes the importance of early diagnosis.⁹⁻¹¹

The patient discussed in this case visited his primary care doctor with concerns regarding his persistent perianal lesions. The primary care physician prescribed prophylactic antibiotics and had him return for a follow-up visit. The primary care physician focused only on the lesions around the anal region instead of performing a thorough exam. Given the high prevalence of coinfection of HIV and syphilis and risk of more aggressive diseases, physicians should take extra precautionary measures to ensure diagnoses are not missed. The patient was subjected to an invasive procedure that yielded no significant result and referred again to another specialist. Ultimately, the infectious disease physician noted the classic maculopapular rash throughout the trunk, arms, and back that resulted in a diagnosis. This case emphasizes the importance of a proper skin exam in each patient. If a proper skin examination was performed, the patient may not have progressed to otosyphilis and neurosyphilis and required hospitalizations along with medical bills from four different specialists.

By increasing recognition of the characteristic skin rash in patients, earlier detection and treatment can be started to avoid transmission to partners and further increasing the surge in syphilis cases in the United States.

CONCLUSION

This case emphasizes the importance of training on recognizing characteristic rashes and performing a thorough full-body skin exam during each patient encounter. Untreated syphilis can result in significant patient mortality and morbidity. By increasing the awareness of syphilis prevalence and atypical presentations amongst HIV-positive patients, physicians can prevent further increase in syphilis cases and transmission from patients to their partners.

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