

Relapse of secondary syphilis in a PLHIV – A new entity

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Abstract

Syphilis and other bacterial sexually transmitted infections (STIs) are on the verge of resurge throughout the world. Coinfection of syphilis and HIV is quite common as they both share a common mode of transmission. The behavior of syphilis is quite altered in the presence of HIV. Relapse of secondary syphilis after the recommended treatment is quite unusual. One such case has been reported, and possible pathogenesis was discussed.

Key words: Immune reconstitution inflammatory syndrome, relapse, secondary syphilis HIV

Introduction

Changing lifestyle of people globally is being observed. Sexual activities among youngsters, migration for the job sake, no restrictions from elders as they are living apart, lot of flow of money in their hands and the weekend culture to shed out their stress, abusive drug

uses, porno sites at their fingertips, not interested in the marriage bond, and increased incidence of divorce and separations are few reasons apart from so many unmentioned activities around the world for the increase in the incidence of sexually transmitted infections (STIs) across the globe. Almost in all referral hospitals and

clinics, there is uniformly reported an upsurge in the incidence of bacterial STIs and viral STIs, especially after the post-COVID-19 era.^[1] The prevalence of HIV remains as such, even though it is said to be declined. The coexistence of syphilis and HIV is a quite common affair as they shared a common epidemiology.^[2] Syphilis behaves differently in the presence of HIV is a well-known entity.^[3] Delay in seroconversion, the persistence of serology even after adequate treatment, delay in healing of primary chancre, precocious tertiary, and central nervous system involvement in early syphilis were known to occur in patients with syphilis when HIV is coexisted. Serological and clinical relapse can occur if syphilis is not treated adequately. However, a clinical relapse after adequate treatment is quite unusual even in the presence of HIV.

Case Report

A 24 years old male unmarried man was referred to my clinic with reactive serology for both HIV and syphilis. On examination, the patient was having generalized, symmetrical, maculopapular lesions all over the trunk and limbs for the past 15 days. He was also having erythematous palmoplantar papular lesions on both sides.

Inguinal lymph nodes were enlarged on both sides and were discrete, not tender. Bilateral cervical and axillary nodes were also enlarged not tender and discrete. The patient was also having candidal balanoposthitis. His rapid plasma reagin (RPR) test for syphilis was reactive in 64 dilutions during June 2023. Treponema pallidum hemagglutination assay and syphilitic treponemal point-of-care card test were also reactive for syphilis. He was reactive also for HIV-1 infection. His HIV viral load was 19,162 copies/mL. CD4 count was 328 cells/mL; CD4:CD8 ratio was 0.41. He was diagnosed to have secondary syphilis, candidal balanoposthitis, and HIV infection. He gave a history of multiple sexual exposures for the past 1 year with sex workers, when he was working away from home. His last sexual contact was 4 months ago. As he was in early syphilis, he was treated with a single injection of benzathine penicillin LA 2.4 mega-units intramuscular route after test dose along with topical clotrimazole cream and tablet fluconazole Fluconazole 150 mg weekly once for 3 weeks. Antiretroviral therapy (ART) was started with TLD (Tenofovir +Lamivudine+Doletegravir) combination with fixed-dose tablet. He had reported mild Jarisch–Herxheimer reaction. Within a month after treatment, his rashes disappeared completely. He was doing well for more than 6 months with increased weight and was free from any symptoms. Seven months after the treatment, he developed once again marked palmoplantar erythematous papules [Figure 1] and generalized, symmetrical faint macular rashes over the trunk, back, and neck. There was no lymphadenopathy. His RPR, after these 7 months, was 16 dilutions reactive. The patient vehemently denies any sort of reexposure as he had already upset with the

HIV-positive result. His repeat CD4 count 7 months after the initiation of ART was 685 cells with a percentage of 28% and a CD4: CD8 ratio of 0.56. Viral load has to be repeated 1 year after the initiation of ART. In this time, the patient was advised to take another three injections of injection benzathine penicillin 2.4 mega-units at weekly intervals for 3 weeks. Seven days after the 1st dose of treatment, there was a marked fading of lesions over the feet was observed [Figure 2].

Discussion

HIV-infected patients with syphilis might be more likely to experience serological failure and reinfection compared to non-HIV-infected patients.^[4] We may speculate that HIV-infected patients with more immunosuppression may respond with a low rate of improvement to the effective treatment. In addition, HIV might accelerate and change the clinical course of syphilis, and this coinfection could increase the incidence of complications of syphilis.^[5,6] Furthermore, HIV makes it more likely for syphilis to present with atypical features.^[7] Here, in this case, a secondary syphilitic patient with HIV infection treated adequately with the recommended dose^[8] had a clinical relapse of secondary syphilis 7 months after the treatment. At the same time, his serological titer was responding to treatment which was reflected by the decline by 4 folds 7 months after the treatment. Reinfection of syphilis is quite unlikely as per the patient's word. He gained marked immune recovery which was revealed by the increase in CD4 count and percentage and the CD4:CD8 ratio. Hence, it could not be considered either as clinical relapse in the presence of adequate and recommended dose of injection benzathine penicillin or as a case of treatment failure due to immune failure. Here, the question posed before us, is whether we have to revise the treatment of syphilis in the presence of HIV infection or to consider this case as a case of "Immune Reconstitution Inflammatory Syndrome (IRIS)" following the speedy immune reconstitution after the appropriate ART, which was revealed by the CD4 reports, or to think of the possibility of a clinical relapse in secondary syphilis, after the completion of recommended anti syphilitic treatment. IRIS in syphilis is a very rare entity.



Figure 1: On February 23rd

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Figure 2: On March 2nd after the first dose of repeat treatment

Conclusion

Clinicians should be highly vigilant in handling cases of coinfection of syphilis and HIV to expect unexpected serological responses, clinical courses, IRIS, and even clinical failure. Long term study may be necessary to assess whether the existing guidelines are sufficient or to be revised about the management of syphilis and HIV coinfection is concerned.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images and

other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

References

1. Available from: [https://www.who.int/news-room/fact-sheets/detail/sexually-transmitted-infections-\(stis\)](https://www.who.int/news-room/fact-sheets/detail/sexually-transmitted-infections-(stis)).
2. Praviitha BP, Prathap P, Asokan N, Sudhiraj TS. The profile of sexually transmitted infections of men who have sex with men: A tertiary care center-based comparative cross-sectional study. *Indian J Sex Transm Dis AIDS* 2023;44:128-31.
3. Wu Y, Zhu W, Sun C, Yue X, Zheng M, Fu G, *et al*. Prevalence of syphilis among people living with HIV and its implication for enhanced coinfection monitoring and management in China: A meta-analysis. *Front Public Health* 2022;10:1002342.
4. González-López JJ, Guerrero ML, Luján R, Tostado SF, de Górgolas M, Requena L. Factors determining serologic response to treatment in patients with syphilis. *Clin Infect Dis* 2009;49:1505-11.
5. Lynn WA, Lightman S. Syphilis and HIV: A dangerous combination. *Lancet Infect Dis* 2017;4:456-66.
6. Funnyé AS, Akhtar AJ. Syphilis and human immunodeficiency virus co-infection. *J Natl Med Assoc* 2003;95:363-82.
7. Luo Z, Zhu L, Ding Y, Yuan J, Li W, Wu Q, *et al*. Factors associated with syphilis treatment failure and reinfection: A longitudinal cohort study in Shenzhen, China. *BMC Infect Dis* 2017;17:620.
8. Sexually Transmitted Infections Treatment Guidelines, MMWR/CDC Recommendations and Reports 2021;70.