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Two cases of "IRIS" with syphilis

Abstract

Immune Reconstitution Syndrome (IRIS) in HIV management is not uncommon. It is a state of hyperinflammatory response that usually occurs in the first six months of treatment of HIV/AIDS patient, following HAART. Co-infection of syphilis in HIV disease is so common. Opportunistic infections like Tuberculosis, Cryptococcosis, Pneumocystis, CMV infections commonly occur as IRIS, whereas IRIS with Syphilis (even though sharing a common mode transmission) had been reported rarely. To highlight the importance of the possibility of IRIS with syphilis to the treating HIV physician and young doctors who are interested in the management of STI/HIV, two such cases were reported.

Keywords: IRIS; Syphilis; HAART; Infections.

Murugan Sankaranantham*
Former Professor of Dermatology, Venereology and Leprosy, Sree Mookambika Institute of Medical Sciences, India.

***Corresponding author:** **Murugan Sankaranantham**
Former Professor of Dermatology, Venereology and Leprosy, Sree Mookambika Institute of Medical Sciences, Kulasekaram, Kanyakumari District, Tamilnadu, India.
Email: murugan2mala@gmail.com

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Introduction

IRIS (Immune Reconstitution Syndrome) occurs following virologic suppression and immune reconstitution after initiation of HAART (Highly Active Anti-Retroviral Therapy), usually within 6 months of treatment [1]. Preexisting infections in individuals with IRIS may have been previously diagnosed and treated, or they may be subclinical and unmasked by the host's regained capacity to mount an inflammatory response [2]. IRIS is a poorly understood condition whose exact mechanism is not yet fully known. It is a state of dysregulated, hyper-inflammatory response against opportunistic infections that usually occurs in the first 6 months of treatment of HIV/AIDS patients [1]. Physicians noted a paradoxical worsening of fever, weight loss, fatigue, and shortness of breath in patients with pulmonary TB and worsening of skin lesions in patients with Leprosy after initiation of treatment, in spite of their decreasing viral load and increasing immune markers like CD4 count. IRIS commonly reported opportunistic pathogen is cytomegalovirus, mycobacterium, cryptococcus, Epstein-Barr virus, pneumocystis, JC virus, hepatitis B, and C. Syphilis shares the common mode of transmission of HIV infection and these co-infections are quite common. But diagnosing syphilis, few months after the initiation of ART or a relapse of a treated case of syphilis following the ART treatment is not so common [3]. It could be due to IRIS as there were previous reports [4,5].

Case report 1

A 24 years old unmarried man referred to my clinic with reactive serology for both HIV and Syphilis. On examination, patient was having generalized, symmetrical maculopapular lesions all over the trunk and limbs for the past 15 days. He was also having erythematous palmo-plantar papular lesions on both sides. Inguinal glands were enlarged on both sides and were discrete, not tender. Bilateral Cervical and axillary nodes were also enlarged not tender and discrete. Patient was also having a candidal balanoposthitis. He gave history of multiple sexual exposures for the past one year with sex workers, when he was working in a place away from his home. His last sexual contact was 4 months ago.

His RPR test for syphilis was reactive in 64 dilutions during JUNE 1923. TPHA 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 19162 copies/ ml. CD4 count was 328 cells / ml, CD4: CD8 ratio was 0.41. He was diagnosed to have Secondary syphilis, Candidal balano-posthitis and HIV infection. As he was in early syphilis, he was treated with a single Injection of Benzathine penicillin LA 2.4 mega units after test dose along with topical Clotrimazole cream and Tablet Fluconazole 150 mg weekly once for three weeks. ART was started with TLD (TDF+ 3TC+DTG) combination 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 free from any symptom. 7 months after the treatment, he developed once again marked palmo-plantar erythematous papules and generalized, symmetrical faint macular rashes over the trunk, back and neck. There was no lymphadenopathy. His RPR, after these seven months, was 16 dilutions reactive. Patient vehemently denies any sort of re-exposure as he had already upset with the HIV positive result. His repeat CD4 count 7 months after the initiation of ART is 685 cells with 28% and a CD4: CD8 ration 0.56. Viral load has to be repeated one year after the initiation of ART.

This time, the patient was advised to take 3 injections of Benzathine Penicillin 2.4 Megaunits at weekly intervals as a benefit of doubt. 7 days after the first injection of the repeat treatment marked fading of lesions over feet were observed.

Case report 2

A 25 years old male patient who had a congenital cataract and dimness of vision, referred from an Ophthalmic institute as he was reactive for HIV (ELISA and Rapid test). He denies any sort of exposure (Both homo and heterosexual). No history of blood transfusion. He had Tattoos over his 3 right hand fingers, 3 years back.

This time he was diagnosed as a case of retinal detachment on his right eye and planned for vitrectomy. His HIV viral load was 103913 copies / cu.mm. His CD4 count was 424 cells cu.mm. CD4% is 23.6%. CD4: CD8 = 0.35. He was started on TLD combination. 100 days after the initiation of ART, he came with the complaints of rashes over both palms and sole and genitals. His serological test for syphilis with card test and TPHA were reactive, His RPR test revealed reactive in16 dilutions. Inguinal and axillary, cervical nodes were enlarged discrete, painless. He was diagnosed as secondary syphilis. As we are not sure about the age of syphilis, he was treated with Injection Benzathine penicillin 2.4 mega units weekly once for 3 weeks. His retinal detachment was not related to either HIV or syphilis as per ophthalmologists.

He had JHR with the first injection. By the second week onwards there was a marked improvement and the palmoplantar rashes started vanishing and the penile lesion disappeared totally. All rashes faded by 4 weeks. His viral load 7 months after the initiation of ART came as less than the detectable limit and the CD4 count was 1113 cells with a CD4 percentage of 19%.

Discussion

HIV- infected patients with syphilis might be more likely to experience serological failure and relapse or infection following treatment compared to non-HIV infected patients [6]. We may speculate that HIV-infected patients with more immunosuppression might respond with a low rate to effective treatment. HIV might accelerate and change the clinical course of syphilis, and this co-infection could increase the incidence of the complications of syphilis [7,8]. Furthermore, HIV makes it more likely for syphilis to present with atypical features and precocious tertiary manifestations.

Here in the first case, a secondary syphilitic patient with HIV infection who was treated adequately with recommended dose [9,10], had a clinical relapse of secondary syphilis 7 months after the anti-syphilitic treatment. At the same time, his serological titre was responding to treatment which was reflected by the decline by 4 folds, within 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 an increase in CD4 count to 685 cells/ cu, mm, the percentage of CD4 cells was 28% and the CD4: CD8 ratio was 0.56. So, it could not be considered either as clinical relapse in the presence of adequate and recommended [9,10] dose of Injection Benzathine Penicillin 2.4 mega units or as a case of treatment failure due to immunological failure as there was an immune boosted up. So, this case can be considered as a case of "IRIS" following speedy immune reconstitution, following HAART as revealed by the CD4 count and percentage reports.

In the second case, as there is no history of sexual exposure, we didn't suspect syphilis in this case. Only after 100 days of ART initiation, symptoms of syphilis were manifested and serologically confirmed. History seems to be reliable. Acquiring two major STIs, just through tattoo alone can also be possible! Because of the immune reconstitution following ART, the latent syphilis became obvious as secondary syphilis in this case. Tattoo as a mode of HIV transmission was already reported by me [11].

Conclusion

HIV- Syphilis co-infection is a quite common phenomena owing to the same mode of transmission of both diseases, IRIS with syphilis is also not uncommon, though reported less often. Manifestations of IRIS with syphilis can occur either as a relapse or as fresh manifestations. So, clinicians should be highly vigilant about these possibilities. Another interesting finding in theses case reports, in the second case both HIV and syphilis were acquired through the route of tattoo piercing as per the patient's history which seemed to be reliable. Nowadays, tattoo piercing available all over the world and the youngsters are passionate towards this culture. So, it is our duty to alarm them about the possibility of transmission of major STIs like HIV, syphilis and hepatitis B and C, through this mode of transmission which are practiced along roads in places of tourist interests.

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