CASE REPORT

Coevality of Secondary Syphilis with Condyloma Acuminata in a HIV reactive MSM: Rare Triple Sexually Transmitted Infections

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Summary

Secondary syphilis is a rare infectious sexually transmitted disease caused by *Treponema pallidum* in present era. It affects skin as well as other organs of the body. We hereby present a case of an adult male who presented with a one-month history of multiple brownish red maculopapular lesions all over the skin of the body involving the palms, soles, oral cavity and genitalia. His serology was positive for HIV, VDRL and TPHA with a low CD4 count. The patient was treated with three weekly doses of parenteral Benzathine penicillin G, antiretroviral therapy and podophyllin for condyloma acuminata to which he responded well.

Key Words: *Syphilis, Immunocompromised host, Condyloma acuminata, Chancre, Penicillin*

Introduction

Syphilis is a chronic infectious granulomatous disorder caused by *Treponema pallidum*, a spirochete. Transmission occurs chiefly via sexual contact and to some extent by blood transfusion of infected blood, via transplacental route or by accidental exposure to the infectious material. Micro or macroscopic trauma in the squamous or columnar epithelium may allow entry of the organism.[1] Syphilitic chancre on glans penis or rectal mucosa provides a portal of entry for the HIV virus. Once the organism enters the human body it invades all the organs of the body most notably skin.[2] The incidence of secondary syphilis has decreased nowadays, but with the emergence of HIV, syphilis may show an unpredictable course and can present with an unusual clinical picture.[3]

HIV-infected males having history of sex with men should undergo screening for syphilis. This might reduce the incidence of the disease in those who test positive and also its consequences.[4] Genital human papillomavirus (HPV) infection is the most common sexually transmitted disease and is second only to human immunodeficiency virus (HIV) infection in

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causing morbidity and mortality. Perianal HPV infection produces a wide range of disease presentations, from asymptomatic infection to benign genital warts to invasive cancer.[5] Patient herein had secondary syphilis with condyloma acuminata with HIV co-infection rarely reported until now.

Case Report

A 28-year-old unmarried male working as teaching faculty in college presented with multiple brownish red raised lesions all over the skin of the body including palms, soles, genitalia and oral cavity along with a growth in the perianal region since 1 month and a small ulcer over the glans penis since 1 month. He also complained of intermittent fever, redness of eyes, weight loss and loose motions for 1 month. On detailed and persistent enquiry, the patient gave history of unprotected sexual contact with his roommates while pursuing his education. He reported that most of the time he was acting as a passive receptive partner for peno-anal intercourse. There was no history of intravenous drug abuse or blood transfusion or heterosexual contact in past. The patient was of average built and had generalized painless firm lymphadenopathy involving suboccipital, postauricular, submandibular, upper jugular, supraclavicular and superficial inguinal group of lymph nodes. Systemic examination was within normal range.

Cutaneous examination revealed multiple brownish red papulonodular rashes all over the body involving palms and soles and external genitalia ranging in size from 0.5 to 2 cm (***Figure 1-4***). Superficial painless erosions were present over the hard palate. The Buschke-Ollendorff sign was positive. Genital examination showed a whitish pink growth covering the anal opening consistent with condyloma acuminata. A single superficial healing painless ulcer was present over the glans of the penis with an indurated base.

His serology was positive for HIV-1 and syphilis with VDRL (1:128) and TPHA reactivity. CSF analysis showed no biochemical or cellular abnormality. Total CD4 count by flow cytometry was in the low range 312 cells/mm3 (normal values: 500 cells/mm^3 to 1,200 cells/mm^3).

Figure 1. Multiple erythematous maculopapular secondary syphilides present over back

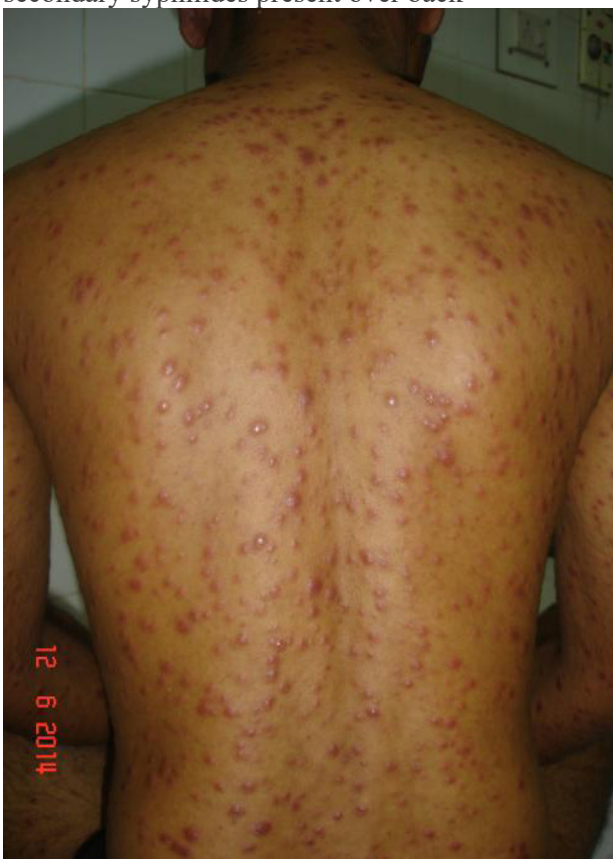


Figure 2. Multiple papular syphilides over both palms

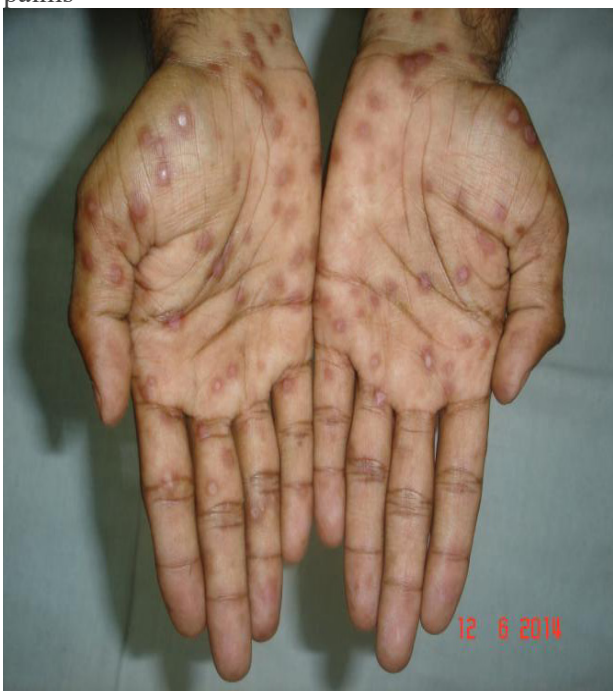
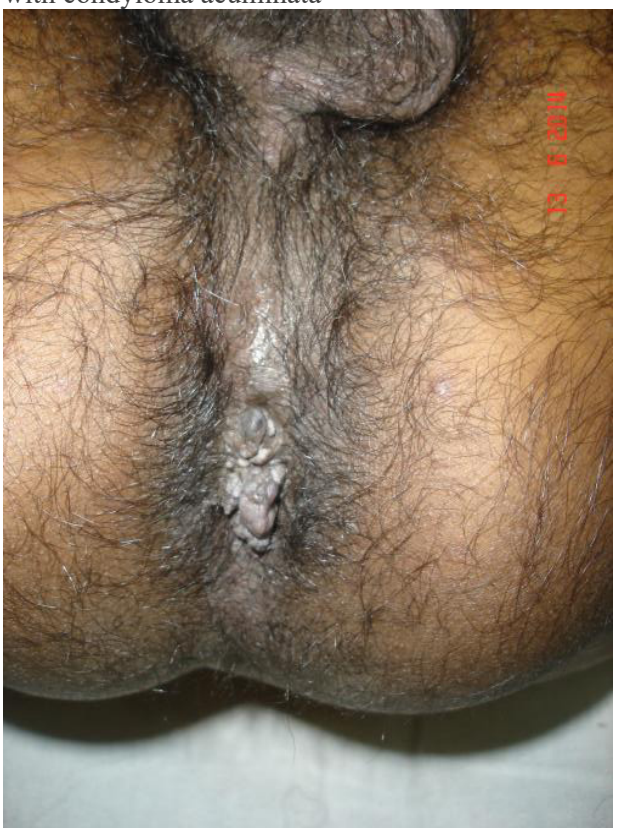


Figure 3. Superficial painless ulcer over glans penis with an indurated base

Figure 4. Warty growth over anal opening consistent with condyloma acuminata



The patient was treated with three doses of parenteral benzathine penicillin 2.4 million units a week apart. The VDRL titre was reduced to 1:32 after treatment in 1 month. In view of co-existing HIV infection and low CD4 count, the patient was started on highly active antiretroviral therapy (ZLN regime), however a week later the patient developed nevirapine-induced maculopapular drug rash. In view of his NVP induced skin rash, his HAART was changed to efavirenz-based regimen. Condyloma acuminata was treated with weekly application of podophyllin resin, which required 5 sittings, 1 week apart for complete clearance of lesions. Partner was called for evaluation but the partner did not come for evaluation and management.

Discussion

The patient reported in our case has coeval three sexually transmitted diseases simultaneously in the form of HIV infection, syphilis and genital condyloma acuminata. Syphilis with HIV infection is extremely rare in today's era due to rampant and injudicious use of antibiotics.[6] But it has been observed in various epidemiologic studies that the incidence of syphilis has increased in homosexual men especially among those who are infected with HIV. Increase in high risk behaviour and decrease in mortality due to HAART can be the cause of this increase.

Syphilis and HIV co-infection may lead to aggravation and early development of tertiary syphilis. It is believed that the sexually transmitted disease including syphilis which produces an ulcerative or warty lesion over the genital organs creates a portal of entry for the HIV virus due to ample availability of inflammatory cells. As a result of co-existing HIV infection, syphilis may rapidly progress to the tertiary stage in a short time period and despite an adequate treatment, relapses or treatment failure may occur. Patients with HIV and syphilis may show a poor response to anti-syphilitic treatment. Serofastness is not observed in patients of syphilis with HIV coinfection.[8]

HPV infection among MSM is highest in those coinfected with HIV.[9] Anal HPV infection, especially high-risk type, is independently associated with HIV acquisition. The mechanisms are not clear yet, but there is a biological plausibility that HPV infection leads to an active cell-mediated immune response through recruitment of macrophages and T

lymphocytes, which are HIV-susceptible cells and may facilitate HIV acquisition.[10] Anogenital disease in the HIV-positive population tends to be more aggressive, multifocal, rapidly progressive, and recalcitrant to standard therapies, compared with disease occurring in HIV-negative patients. HIV-positive patients, therefore, require aggressive screening, treatment, and follow-up.

Our case had coexistence of syphilis and HPV with HIV infection, which has not been reported until now. Also in spite of being immunocompromised our patient responded well to first line treatment for syphilis and condyloma acuminata as opposed to the dictum of lesions recalcitrant to standard therapies. In addition, our patient was a teacher in a rural where in school-based sexual health education and comprehensive approach to promoting sexual health among young people was also undertaken.

Conclusion

In spite of being literate and having awareness about harmful effects of unprotected sexual contact, still he continued with high-risk behavioral activity. Hence, we must rethink our sexual health awareness program.

Conflict of Interest Declaration

The authors have no conflict of interest.

Acknowledgement

Nil

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