

A case of secondary syphilis with stage four HIV infection accompanied with tuberculous lymphadenitis in bisexual man



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ABSTRACT

Introduction: Sexually transmitted infections (STIs) is still a major health issue nowadays. Several studies have shown an increased incidence of STIs in the group of man who has sex with man (MSM) and bisexuals when compared to heterosexual men or women. This is inseparable from risky sexual behaviour practiced by this population, so it is not impossible for individual in this population to be suffering from more than one STI.

Case description: We report one case of secondary syphilis with fourth stage HIV infection accompanied with tuberculous lymphadenitis in a bisexual man.

Conclusion: Management of each specific condition have to in accordance with treatment standards guideline. Long term evaluation regarding patient compliance, laboratory serology test, and further education regarding the disease and transmission are mandatory.

Keywords: syphilis, HIV, tuberculous lymphadenitis, bisexual.

Cite This Article: Dwi Puspawati, N.M., Suryawati, N.N., Sudarsa, P.S.S. 2020. A case of secondary syphilis with stage four HIV infection accompanied with tuberculous lymphadenitis in bisexual man. *Intisari Sains Medis* 11(3): 938-941. DOI: [10.15562/ism.v11i3.687](https://doi.org/10.15562/ism.v11i3.687)

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INTRODUCTION

Bisexual behaviour is still a debate in terms of legal, social, religious and cultural customs.¹ The health aspect consider bisexual groups as playing an important role in the transmission of Human Immunodeficiency Virus (HIV) and Sexually Transmitted Infections including syphilis.² Data from the Centers for Disease 2013 US Controls and Preventions (CDC) showed an increase in cases of primary and secondary syphilis in the group of man who have sex with man (MSM) and bisexuals up to 75%.³

Syphilis and HIV are diseases that can be transmitted through sexual intercourse, so there is high possibility for someone to suffers both at once. Syphilis and HIV infections that occur together will add to the complex enforcement of diagnosis, management, disease progression, and the risk of neurological complications.⁴

Tuberculosis is an opportunistic infection that often occurs as a co-infection with HIV. The pandemic of HIV infection causes a significant increase in tuberculosis cases in several countries with an estimated increase of 20-fold tuberculosis incidence among HIV-infected patients compared to non-HIV patients.⁵

We report a case of secondary syphilis with fourth stage HIV infection accompanied by tuberculous lymphadenitis in a bisexual man to increase knowledge about management of co-infection HIV, tuberculosis, and syphilis in high-risk population.

CASE DESCRIPTION

A 27-year-old man came to our clinic with complaints of reddish spots on both of his hands and feet since 1 month ago. These spots are not found in other parts of his body and are not felt itchy. The patient also complained of a lump on the left side of his neck since 1 month ago accompanied by intermittent fever. In addition, there is a history of 10 kg weight loss since 6 months ago. Patient had history of multi-partner sexual intercourse with both women and men. When having sex with men, patient acted as both insertive and receptive. Patients never used condoms when having sex either with men or women.

On physical examination, there was lymph nodes enlargement in the both left and right neck region, consisted of multiple nodules, round shape, 1-2.5 cm in diameter, mobile, with soft consistency and pain during palpation (Figures 1A and 1B). Dermatological status of both palms and soles, we found multiple erythematous macules with white thin scale on it, well-defined margin, round shape, 0.2-0.8 cm in diameter, which pales in pressure (Figures 1C and 1D).

Serological test for syphilis was reactive with titers of VDRL 1:256 and titers of TPHA 1: > 5120. The fine-needle aspiration biopsy (FNAB) result of left colli nodules is tuberculous lymphadenitis. The consultation to Voluntary Counselling and Testing (VCT) for HIV concluded this patient with fourth stage of HIV infection according to WHO criteria

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Figure 1 A. Enlargement of right colli lymph node; B. Enlargement of left colli lymph node; C. Erythematous macule on the palms; D. Erythematous macule on soles of the feet



Figure 2 A. Enlarged right colli lymph node; B. Enlargement of the left colli lymph nodes; C. lesions on the palms disappear; D. Leg lesions leave hyperpigmented macule

with HIV serologic test was reactive and number of CD4 cell are 305 cell/uL.

The working diagnosis of this patient was secondary syphilis (*roseola sifilitika*) and fourth stage HIV infection accompanied by tuberculous lymphadenitis. Management of this patient was a single-dose intramuscular injection of 2.4 million IU Benzathine Penicillin, Anti-Retroviral Regimen (ARV) treatment consisted of Efavirenz 600 mg, Lamivudine 300 mg, Tenofovir 300 mg and combination treatment for tuberculous lymphadenitis, including Rifampicin 150 mg, Isoniazid 75 mg, Pyrazinamide 400 mg and Ethambutol 275 mg.

There was clinical improvement one month after therapy. The neck nodules are smaller and not tender (Figure 2A and 2B). Lesions on the hands disappear while the lesions on the soles of the feet fade leaving hyperpigmentation post inflammation (Figure 2C and 2D). The serological results for syphilis were improved with a decrease in titers of VDRL into 1: 128.

DISCUSSION

Bisexuality is a person's attraction, both men and women, to both sexes simultaneously and can achieve erotic satisfaction optimally both with the same sex and the opposite sex. Bisexual groups have a higher potential for transmission and spread of HIV and STIs compared to MSM and heterosexual groups.²

In this case, patient was a bisexual person and have many sexual partners both male and female. The patient did not know the history of sexually transmitted diseases of his partner, and never used condoms during sexual intercourse. This risky sexual behaviour to cause patient suffered more than one sexually transmitted infection. In this case the patient was diagnosed with secondary syphilis (*roseola sifilitika*) and fourth stage HIV (WHO) accompanied by tuberculous lymphadenitis.

Diagnosis of secondary syphilis in this case was established based on clinical and laboratory result. Clinically multiple erythematous macules were found on both of his palms and soles. The literature mentions secondary syphilis characterised by localised or generalised skin eruption known as *roseola sifilitika*. Lesions are usually not itchy and as many as 75% of cases are found on the palms and soles of the feet. In secondary syphilis, constitutional symptoms of mild fever, malaise, myalgia, arthralgia and generalised lymphadenopathy can be found. Other symptoms that can also be found are mucosal patches in the oropharynx, condyloma lata or alopecia. Investigation for the diagnosis of syphilis was to identify *T. pallidum* organisms directly in clinical specimens or by serological examination.^{6,7}

In cases, VDRL and TPHA examinations showed reactive results with titer of VDRL 1: 256 and titer of TPHA 1:> 5120.

Besides syphilis, patient also diagnosed with fourth stage HIV infection. The diagnosis of HIV infection is based on clinical manifestations and laboratory result. WHO divided HIV infection clinically in 4 stages. Clinical manifestations of fourth stage include wasting syndrome, *Pneumocystis carinii* pneumonia, cerebral toxoplasmosis, cryptosporidiosis diarrhoea for more than 1 month, extrapulmonary cryptococci, cytomegalovirus retinitis, mucocutaneous herpes simplex for more than 1 month, progressive multifocal leucoencephalopathy, disseminated mycosis, oesophageal candidiasis, disseminated atypical mycobacteria, non-typhoid salmonellosis septicemia, extrapulmonary tuberculosis, lymphoma, HIV encephalopathy and Kaposi's sarcoma.⁸

In the case, patients present with symptoms of weight loss, intermittent fever and extrapulmonary tuberculosis. The laboratory results also support the presence of HIV infection where HIV serological tests were reactive and number of CD4 cell was 305 cells/uL. There were also enlargement of right and left neck lymph nodes (lymphadenopathy).

Both secondary syphilis and HIV infection can provide clinical manifestations of lymphadenopathy. Lymphadenopathy in secondary syphilis usually generalised, but it can also be localised. Localised lymphadenopathy in secondary syphilis mostly affects lymph nodes in the axilla (38%), whereas other 28% in posterior cervix, 18% in femoral, and 17% in epitroclear.^{6,7} Lymphadenopathy in HIV person also generalised but usually more persistent. In patients with HIV infection it must be ensured that there are no other infections that cause the lymphadenopathy. FNAB by cytology examination is an effective method in determining the diagnosis of various cases of disease that have symptoms of lymphadenopathy. This examination also helps differentiate between infection, metastasis of malignancy or malignant lymphoma.⁹ In this case, diagnosis of tuberculous lymphadenitis was established from FNAB results. Tuberculous lymphadenitis is inflammation of the lymph glands caused by the tuberculous bacillus. Tuberculosis is one of the main opportunistic infections that affects the morbidity and mortality of people with HIV / AIDS infection and it caused 30% of deaths in the AIDS population.^{10,11}

The Center for Disease Control and Prevention (CDC) was recommended the penicillin as treatment for syphilis. The therapeutic regimen for syphilis infection is determined by the stage of the disease. In early-stage syphilis (primary syphilis,

secondary and early latent) the main therapy is a single-dose intramuscular injection of 2.4 million international units Benzathine Penicillin G.¹² In this case, the treatment given is in accordance with these recommendations.

Treatment of HIV infection with an antiretroviral regimen (ARV) can suppress HIV replication so that it can reduce the viral load in the patient's body. WHO recommends standard treatment for first-line HIV infection to be two groups of NRTIs plus 1 NNRTI group.⁸ Patients given ARV therapy consisting of Efavirenz 600 mg, Lamivudine 300 mg and Tenofovir 300 mg.

Recommendations for treatment of tuberculosis in HIV-infected patients are similar to those for patients without HIV infection. Treatment is divided into 2 phases: intensive phase for 2 months, and continuous phase for 4 months. Clinical, radiological and microbiological responses to the treatment were evaluated before treatment was stopped at the end of the 6th month.¹¹ Patient received standard first-line tuberculosis regimen therapy consisting of 150 mg Rifampicin, 75 mg Isoniazid, 400 mg Pyrazinamide and 275 mg Ethambutol.

Secondary syphilis accompanied by HIV infection with penicillin treatment has a good prognosis and provides a fairly high cure rate. In addition to treatment factors, the prognosis is also determined by patient adherence to treatment and behavioral control, especially sexual behaviour that causes reinfection.⁴ In the case, a month post-therapy found improvement in clinical and serological examination results. But the patient's prognosis is dubious because long-term observation is still needed.

CONCLUSION

We reported a case of secondary syphilis and fourth stage HIV infection accompanied by tuberculous lymphadenitis in a bisexual man. Diagnosis of secondary syphilis, fourth stage HIV infection and tuberculous lymphadenitis were established based on clinical manifestations and laboratory result. Management of each diagnosis in accordance with treatment standards guideline. There are improvements in clinical manifestations and serological test a month after therapy. The prognosis in patients is dubious because long-term clinical and serological monitoring is needed.

ETHICAL CONSIDERATION

Patient had received signed inform consent regarding publication of his respective photograph in journal article prior to any data collection.

CONFLICT OF INTEREST

The authors declare there is no conflict of interest regarding publication of current report.

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