Introduction

Syphilis infection has been shown to have an impact on achieving appropriate viral suppression in HIV co-infected patients. The burden of syphilitic infection, as represented by high rapid plasma reagin (RPR) titers, may also have an effect on viral suppression and immune reconstitution. We sought to analyze viral suppression in HIV and syphilis co-infected MSM patients, when compared to HIV-positive MSM controls without syphilis, in the 550 clinic at the University of Louisville, KY. In addition, we describe the demographic characteristics of these populations.

Methods

Study design and population

This was a retrospective, case-cohort study. New enrollees to HIV care at the 550 clinic at the University of Louisville between January 2012 and December 2013 were studied. Six hundred and twenty new enrollees were identified and 25 MSM were found to have syphilis co-infection. These 25 patients were then compared with 25 MSM HIV-positive, syphilis negative patients, matched by age, who enrolled in care during the same period of time (control group).

Characteristics of HIV-positive patients co-infected with syphilis at the 550 clinic in the University of Louisville, KY

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Abstract

Background: Syphilis and the burden of syphilitic infection have an impact on achieving viral suppression in HIV co-infected patients, particularly in males who have sex with males (MSM). We analyzed viral suppression and demographic characteristics in co-infected MSM patients compared to the non co-infected, in the 550 clinic at the University of Louisville.

Methods: This was a retrospective, case-cohort study. New enrollees to HIV care at the 550 clinic between January 2012 and December 2013 were studied. 25 MSM were found to have syphilis co-infection and compared to 25 MSM without syphilis.

Data on race, RPR titers, CD4 and VL at initial visit and 1 year after antiretroviral therapy (ART) and ART regimens were collected. Chi-square and Fischer's exact tests were used for analysis.

Results: Six of 25 patients (24%) in the co-infected group had a new syphilis infection. 52% of patients in the co-infected group had RPR titers >1:32. Seventy-six percent of patients in the control group achieved virologic suppression at 1 year, compared to 52% in the co-infected group (p= 0.073). There was no correlation between vireologic suppression and RPR titers. All patients were on ART.

Conclusions: Our study suggests a trend towards lower virologic suppression rates in MSM patients with syphilis and HIV co-infection. The appropriate diagnosis and treatment of syphilis in the MSM population could lead to better response to ART and lower transmission rates for both diseases. Randomized studies are needed to determine the impact of syphilis and HIV co-infection on viral suppression.

Methods

Study variables

Data on race, RPR titers, number of syphilis reinfections, CD4 and viral load at initial visit and after 1 year of antiretroviral therapy (ART), as well as ART utilized were collected. HIV virologic suppression was defined as viral load <20 copies/ml at 1 year after initiation of therapy.

Statistical analysis

Relationships between CD4 count, HIV VL, RPR titers and HIV viral suppression were analyzed by using Chi-squared or Fisher’s exact tests.

Results

• Six of 25 patients (24%) in the co-infected group were diagnosed with a new syphilis infection upon entry to clinic.

• 52% of patients in the co-infected group had RPR titers higher or equal to 1:32.

• Seventy-six percent of patients in the control group achieved virologic suppression at 1 year, compared to 52% in the co-infected group (p= 0.073).

• There was no correlation between CD4 < 200 and VL > 100,000 with RPR titers >1:32.

• All patients were started on ART in both groups

• 44% of patients in the control group were started on NNRTI-based regimens; 40% of patients in the co-infected group were placed on integrase inhibitor-based regimens.

• Table 1 details the demographic characteristics and relationships between the co-infected and control groups.

Conclusions

• Our study suggests a trend towards lower virologic suppression rates in MSM patients with syphilis and HIV co-infection, which is in agreement with published literature.

• We did not observe a correlation between high RPR titers and lack of HIV virologic suppression, which has been suggested in some studies.

• The appropriate diagnosis and treatment of syphilis in the MSM population could lead to better response to ART and lower transmission rates for both diseases.

• Further randomized studies are needed to determine the true impact of syphilis and HIV co-infections on HIV viral suppression.

References


3. Low viral suppression and high HIV diagnosis rate among men who have sex with men with syphilis- Baltimore, Maryland. Cooley et al. Sexually Transmitted Diseases 2015; 42(4): 226-231
