

## Original Article

### Biological false reactive VDRL test among the HIV-infected patients: A note on its prevalence

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#### Abstract:

Presently, the screening of syphilis is dependent mainly on serological tests. In the sexually transmitted disease clinic, syphilis serology is a basic screening test. The results VDRL test among of 150 HIV (82 males, 68 females) infected, regardless to immune status (CD4+ count), were studied. It was found that in 2 cases, the VDRL was biologically false reactive (VDRL positive, TPHA negative), who had CD4+ count >200 /mL, giving the incidence rate equal to 1.3 % (1.2 % for male and 1.5 % for female).

**Key Words:** HIV, Syphilis, VDRL, False positive

## Introduction

Syphilis is a disease caused by a spiral organism, *Treponema pallidum*. Presently, the screening of syphilis is dependent mainly on serological tests.

In the sexually transmitted disease (STD) clinic, syphilis serology is a basic screening test. In addition, this test is always requested routinely accompanied with the Anti HIV serology test. Since routine syphilis screening is routinely carried out by means of a non-treponemic reaction such as VDRL. A positive VDRL test, should be confirmed by treponemic techniques such as fluorescent treponemal antibody absorption (FTA-ABS) and/or hemagglutination (TPHA) and therefore the interpretation of the VDRL results must be carefully done[1] as biological false reactive VDRL can be seen. The recent report of Griemberg et al [1], mentioned the rate of biological false positive equaled to 0.66 %. However, the rate of biological false reactive VDRL among the HIV-infected patients is rarely mentioned. Here, the author reports the rate of biological false reactive among Thai HIV-infected patients.

## Materials And Methods

This study was designed as a descriptive retrospective study. A review of VDRL laboratory results of the HIV infected patients who attended the physician at the Sexually Transmitted Disease Clinic, King Chulalongkorn Memorial Hospital during year 2001 - 2004 was performed. In this study, VDRL test was performed in the same laboratory or in different laboratories (with related quality control and range of values) by standard method. The study on the VDRL results of 150 HIV (82 males, 68 females) infected, regardless to immune status (CD4+ count), was performed. The rate of biological false reactive VDRL results was determined (VDRL reactive, TPHA negative). Descriptive statistical analysis was performed where appropriate. Comparison between rates was performed using Fishers exact test. P value less than 0.05 was accepted as statistical significance level.

## Results

In this study, the VDRL biological false reactive was detected in 2 cases, who had CD4+ count >200/mL, giving the incidence rate equal to 1.3% (1.2% for male and 1.5% for female). However, the 2 cases with biological false positive, after blood test, was lost for the following up, therefore, the seroconversion pattern or relevant clinical findings could not be studied. Since not all HIV infected patients had got CD4+ count test, it is impossible to further analyze the correlation between CD4+ count status and biological false positive VDRL.

## Discussion

The present epidemic of syphilis is related to the relapse into unsafe sexual behavior.[2] The most widely used screening tests for syphilis are the VDRL and the rapid plasma reagin (RPR) and for confirmation the FTA and the TPHA tests.[3] Flores noted that syphilis was common in HIV-infected patients, who may have an altered antibody response to infection and an apparent increased incidence of neurologic complications.[4] In addition, syphilis is occurring in a substantial number of patients infected with the HIV, thus adding to the complexities of diagnosis and treatment.[4] In a recent study, active syphilis was reported in 151 of 11,368 HIV infected patients (1.33%).[5]

There are a few reports of VDRL status in HIV individuals. Fewer reports on the biological false positive VDRL in HIV individuals are documented. In this work, the author studied the rate of biological false reactive VDRL among the HIV-infected patients. Of interest, in this study, the rate is significantly lower (by Fishers exact test) than a recent previous report among prostitutes in India (10/94, about 10.6 %).[6] In the general population, the biological false positive VDRL generally returns to negative within 14 weeks, without other clinical significance.[7] However, in this study it was not possible to follow up the cases with biological false positive VDRL to ascertain the clinical course. Further prospective study on the HIV infected patients with biological false reactive VDRL results to assess the seroconversion pattern and possible silent abnormality is recommended.

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