

# LIMITATIONS AND CONSEQUENCES OF BASING LATE SYPHILIS SEROASSESSMENTS ON VDRL TEST

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## ABSTRACT

The purpose of this paper is to caution about a recommendation made in 1996 by the 39th Meeting of the European Committee on Health, which operates within the Council of Europe. It prescribes a screening for the agents of major microbial infections, syphilis included, that endanger transplantation. This leaves an alternative in choosing between the VDRL (non-treponemal) and TPHA (treponemal) tests. With a retrospective analysis of the findings of our tests collected in a proficiency testing program, we have attempted to estimate the size of a potential diagnostic miss that could result from such recommendation. The results were obtained on 18,094 subjects (nonvenereal inpatients, psychiatric asylum patients, persons undergoing preemployment examination, persons seeking medical certificates or international health documents, pregnant women screened for syphilis) who were tested with both tests simultaneously and came from two public health laboratories. A false negative VDRL ratio calculated from the 265 infected (i.e., TPHA-reactive) was defined as a diagnostic miss. It amounted to 84.5%. A statistical procedure derived from the Bayes theorem was used to assess the active late syphilis, yielding a value as high as 21.0% per 265 subjects infected, which was significantly more than the percentage suggested by the VDRL reactive test (15.5%). These results suggest that, for the needs of transplantation, organ and tissue donors (and all venerological or nonvenerological subjects) should also undergo the screening for syphilis with the TPHA test as is usual in transfusiology.

## KEY WORDS

*VDRL, screening disadvantages, late syphilis detection model.*

## INTRODUCTION

Recommendations on the methods to use in serological screenings for the most prevalent microbial infections (one being syphilis) linked with tissue and organ transplantation came from the 39th Meeting

of the European Health Committee (CDSP) held in Strasbourg in June 1996 (1). This committee operates within the Council of Europe. Although the risk of syphilis transmission through transplantations may be small, positive reaction in a syphilis test is indicative of the donor's hazardous sex behavior.

