

PH062454 : MAJOR HEALTH SYSTEMS DEVELOPMENT PROGRAM

KEY WORDS: TB, HIV/AIDS, VIETNAM, CO-TRIMOXAZOLE, TB  
TREATMENT OUTCOMES

TRINH THI THANH THUY: FACTORS ASSOCIATED WITH  
UNSUCCESSFUL TB TREATMENT OUTCOME ON HIV-INFECTED TB  
PATIENTS IN AN GIANG PROVINCE, VIETNAM, 2001-2004. THESIS  
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### Background

HIV has led to rising rates of tuberculosis (TB) around the world, even in countries with strong TB control programs such as Vietnam. Mortality is high especially in HIV-infected TB patients, but few studies from Southeast Asia have previously documented the benefits of interventions, such as co-trimoxazole prophylaxis treatment (CPT) for HIV patients, in reducing mortality during TB treatment. I examined characteristics of HIV-infected TB patients from one province in Vietnam and factors associated with unsuccessful treatment outcome, including the impact of CPT use.

### Methods

I retrospectively abstracted data from public health and clinical records of a cohort of all HIV-infected TB patients diagnosed with TB from 2001-2004 in An Giang, a province in southern Vietnam, in which all TB patients received HIV counseling and testing. Standard WHO definitions were used to classify TB treatment outcomes. Multivariable analyses were performed to identify risk factors associated with the composite outcome of death, default, or treatment failure during TB treatment.

### Results

From 2001-2004, Preventive Medicine Center in An Giang identified 637 HIV-infected TB patients, of whom 502 (79%) were male and 320 (50%) were aged 25-34 years. The most common self-reported HIV risk factor was having sex with a commercial sex worker in 221 (35%) patients. TB was classified as smear-positive in 530 (83%), smear-negative in 30 (5%), and extra-pulmonary in 77 (12%) patients. During TB treatment, 166 (26%) patients died, 9 (1%) defaulted, and 6 (1%) failed. Of 453 patients who took CPT, 116 (26%) had an unsuccessful outcome compared with 33 (72%) of 46 patients who did not take CPT (relative risk, 0.4; 95% CI, 0.3-0.5). Even after adjusting for gender, rural residence, TB smear status and disease location, and the occurrence of adverse events during TB treatment, age and year of treatment the benefit of CPT persisted (adjusted odds ratio for unsuccessful outcome 0.15; 95% CI, 0.08-0.29).

### Conclusions

In Vietnam, HIV/TB co-infection is associated with poor TB treatment outcome, but the effect was mitigated by CPT, supporting WHO recommendations to prescribe Co-trimoxazole to HIV-infected TB patients.

Field of study: Health Systems Development Student's signature \_\_\_\_\_

Academic year: 2006 Advisor's signature \_\_\_\_\_