

# **General awareness of HIV, tuberculosis co-infections and the quality of life among patients with HIV in Xinjiang, in western China.**

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av Rena Maimaiti

Fakultetsopponent:  
Professor Eric Sandström, Venhälsan, Södersjukhuset, Karolinska Institutet i Stockholm.

Avhandlingen baseras på följande delarbeten:

**I** Elin Lönn, Karin Sahlholm, Rena Maimaiti, Kaisaier Abdukarim, Rune Andersson.

**A traditional society in change encounters HIV/AIDS: knowledge, attitudes, and risk behavior among students in northwestern China.**

AIDS patient care and STDs 2007;21(1): 48 - 56

**II.** Rena Maimaiti and Rune Andersson

**Awareness and attitudes about HIV among pregnant women in Aksu, Northwest China.**

Open AIDS J. 2008; 2: 72–77.

**III.** Rena Maimaiti, Zhang Yuexin, Peierdun Mijiti, Pan Kejun, Maimaiti Wubili, Maimaitijiang Musa, Rune Andersson

**High prevalence and low cure rate of tuberculosis among patients with HIV in Xinjiang, China.**

Submitted.

**IV.** Rena Maimaiti, Zhang Yuexin, Pan Kejun, Maimaiti Wubili, Christophe Lalanne, Martin Duracinsky, Rune Andersson

**Low quality of life among people living with HIV in Xinjiang, West China.**

Submitted.



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## **General awareness of HIV, tuberculosis co-infections and the quality of life among patients with HIV in Xinjiang, in western China.**

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### **ABSTRACT**

Mycobacterium tuberculosis (TB) and human immune deficiency virus (HIV) infections are major global health problems. The overall aims of my thesis were to analyze awareness of HIV, to examine the care of HIV and TB patients and to identify factors reducing their quality of life.

In **paper I**, questionnaires were distributed to 400 university students in 2004. Twenty open interviews were conducted. There were knowledge gaps about how HIV is not transmitted. Twenty-eight per cent of the undergraduates and 17% of the postgraduates would not tell anyone if they were infected with HIV. In the interviews students' knowledge of HIV/AIDS seemed to be superficial.

In **paper II**, a descriptive, cross-sectional survey of knowledge and attitudes about HIV among 291 consecutively selected pregnant women was conducted in November 2005 in Aksu city. We found limited knowledge of mother-to-child transmission, with several common misconceptions. The common belief that social contact causes transmission means there is a high risk that patients are stigmatized.

In **paper III**, clinical and laboratory data of 333 patients with HIV and TB were compared with 2668 patients with HIV only 2006-2011. The adherence to guidelines for isoniazid prophylactic treatment was low, in particular for patients who were intravenous drug users (IVDU) at 51.4% compared to 63.1% for non-IVDU ( $p < 0.05$ ) patients. The one-year cure rate of TB in our study was 69.2%, compared to 91.4% for all cases of TB in Xinjiang 2011. The risk of not surviving over five years was significantly higher in patients with HIV+TB compared to HIV only, after adjusting for sex and IVDU with HR=1.84 (95% CI 1.43-2.35;  $p < 0.0001$ ).

In **paper IV**, a total of 679 HIV-positive patients on antiretroviral treatment were recruited from four clinics in Urumqi 2013-2014. The patients from Xinjiang had a significantly lower health-related quality of life (HRQL) than patients from France, Australia, the US, Brazil, Thailand, Cambodia, Senegal and central southern China, when comparing treatment impact and general health scores. We found that 86% of the patients on antiretroviral treatment for HIV were afraid to tell others they were HIV positive, 70% reported economic difficulties, and 69% felt often or always depressed, but only one per cent received anti-depressive treatment.

**Conclusions:** Knowledge of HIV/AIDS among students and pregnant women was superficial and need improvement.

The low cure rate of TB and reduced 5-year survival in HIV-positive patients co-infected with TB could be caused by late diagnosis of HIV and no availability of TB-resistance tests, together with a lack of documented high levels of adherence to HIV and TB treatment regimens.

Patients in Xinjiang had low HRQL compared to the central southern China and seven other countries.

**Key words:** HIV, tuberculosis, quality of life, prevention, pregnancy, isoniazid prophylaxis, treatment outcome.

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