

Special Embargo for Release: 10 a.m. ET, Tuesday, June 7, 2005 Media Advisory: To contact Alison D. Grant, M.B.B.S., Ph.D., email: alison.grant@lshtm.ac.uk or call 44-20-7927-2304.

TREATMENT HELPS IN PREVENTING TB AMONG THOSE AT HIGH RISK WASHINGTON, D.C.— The drug isoniazid reduced the incidence of tuberculosis among HIV-infected miners in South Africa, a population at high risk of TB, according to a study in the June 8 issue of JAMA, a theme issue on tuberculosis.

Lead author Alison D. Grant, M.B.B.S., Ph.D., of the London School of Hygiene and Tropical Medicine, London, presented the findings of the study at a JAMA media briefing on tuberculosis at the National Press Club.

A major consequence of the human immunodeficiency virus (HIV) epidemic in developing countries is the increasing incidence of tuberculosis (TB), according to background information in the article. The cornerstone of TB control programs is the World Health Organization (WHO) strategy known as DOTS (directly observed therapy, short course), which may be effective in controlling drug resistance but has not prevented rising TB incidence in regions with high HIV prevalence.

The impact of HIV on TB is illustrated by data from gold mines in South Africa, where overall TB incidence now exceeds 4,000 per 100,000 population per year (i.e., 4 percent). Tuberculosis incidence was already high in this setting before the spread of HIV infection, largely because of a high prevalence of silica dust exposure. Rising HIV prevalence has resulted in increasing TB incidence, despite well-implemented TB control programs. Additional interventions are required to reverse the rise of TB in such settings.

In collaboration with the mining health service, the study team established a clinic for HIV-infected employees in a gold mining company in South Africa in 1999 to provide specialist care for HIV-infected employees, including preventive therapy (isoniazid and cotrimoxazole). This study evaluates the effect of this intervention. The authors analyzed 1,655 HIV-infected males (median age, 37 years) attending the clinic between 1999 and 2001 (before antiretroviral therapy was available). Median follow-up was 22.1 months. Employees were invited in random sequence to attend a workplace HIV clinic. Isoniazid, 300 mg/d, was self-administered for 6 months among attendees with no evidence of active tuberculosis.

A total of 1,016 of 1,655 men included in the analysis attended the clinic at least once. Six hundred seventy-nine (97 percent) of 702 men eligible to start primary isoniazid preventive therapy did so. The researchers found that the tuberculosis incidence rate before vs. after clinic enrollment was 11.9 vs. 9.0 per 100 person-years, respectively (incidence rate ratio [IRR] after adjustment for calendar period, 0.68 [32 percent reduced incidence]). In further analysis adjusting for calendar period, age, and silicosis grade, the tuberculosis IRR for clinic enrollment was 0.62 (38 percent reduced incidence). In analysis excluding individuals with a history of tuberculosis (and, hence, ineligible for isoniazid preventive therapy), the adjusted IRR for clinic enrollment was 0.54 (46 percent reduced incidence).

"Despite our intervention, the TB incidence rate in the postclinic phase remained unacceptably high at 9 per 100 person-years," the authors write.

"Additional interventions such as secondary preventive therapy and antiretroviral therapy [which is now being rolled out among the workforce] are required to reduce the very high residual morbidity attributable to TB in this community. Further work is needed to determine how best to use available interventions to minimize TB morbidity in areas where both HIV and TB are highly prevalent," the researchers conclude.

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