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Letter to editor Open Access

Duration of Isoniazid Prophylaxis in HIV-Infected Individuals Living In Endemic Areas of Tuberculosis

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Patients with HIV infection represent a substantial fraction of the total population of patients with active tuberculosis infection. In 2008, approximately 709,000 (7.7%) of new tuberculosis disease cases and 200,000 tuberculosis-related deaths were estimated to have occurred in HIV positive individuals. In the developing world, tuberculosis has emerged as the most common opportunistic infection and the leading cause of death in HIV infected patients [1]. In regions where tuberculosis is prevalent, 44% of HIV patients could develop tuberculosis in the absence of preventive therapy or HAART [2].

Currently available strategies to prevent tuberculosis are effective. In 10 trials of tuberculosis prevention including a total of 5762 patients with HIV infection, preventive therapy was associated with a 32% overall reduction in the risk of developing active tuberculosis. In the four trials examining the efficacy of isoniazid therapy for HIV infected individuals with a positive tuberculin skin test, the rates of prevention were even better, 62% [3]. These impressive results have generated broad consensus supporting effective treatment of latent tuberculosis in HIV infected patients. In the current ATS/CDC guidelines, the authors recommend that all patients with HIV infection diagnosed with latent TB should receive treatment, and, when isoniazid is chosen, the duration of treatment should be extended to nine months rather than six [4].

However, accumulating evidence suggests these recommendations may not be sufficient. In a study of isoniazid administered to HIV positive patients with a positive or anergic tuberculin skin test in Uganda, Johnson et al. found that the protection conferred by isoniazid was lost a year after therapy. Similar findings were reported by Quigley et al. who found that, compared with the protection observed during isoniazid therapy, the protection was lower in the 1.5 to 2.5 years after completion of therapy and was absent after 2.5 years [5]. Samandari et al. reported that a 36 month course of isoniazid prophylaxis reduced the incidence of tuberculosis by 43% compared with a 6 month course [6]. Recently, Churchyard et al. showed that mass screening and treatment for latent tuberculosis in continuously exposed workers in South African gold mines reduced the rates of active tuberculosis by 58% while the workers were taking isoniazid but these effects were lost after therapy was stopped [7]. And Rangaka et al. found that the effect of isoniazid in HIV people treated for 12 months was greatest when they are still on treatment (HRu=0.52), than between 12–23 months (HRu=0.61) and for 24 or more months (HRu=0.78), but without statistical signification [8].

With these results we proposed to give permanently INH for HIV people living in an TB endemic area, as Peru, as primary prophylaxis when CD4 counts less than 200 cells/ml or if there is a history of oropharyngeal candidiasis and as secondary prophylaxis for HIV patients with previous TB disease for lifelong, unless reconstitution of the immune system occurs, similar to the recommendation in use in all the world for prevention of *Pneumocystis* [9].

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