

Study shows common vitamin and other micronutrient supplements reduce risks of TB recurrence

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New findings show a link between micronutrient supplementation and reduced risk of recurrence during tuberculosis chemotherapy, according to a study published in the June 1 issue of *The Journal of Infectious Diseases*, now available online.

Nutritional assessment and support in tuberculosis therapy, once common before the advent of anti-TB drugs, is no longer an integral part of clinical therapy in most low-income countries even though poor nutrition impairs the immune system and leads to risk of further infection and relapse.

In Tanzania, Eduardo Villamor, MD, DrPH, of the Harvard School of Public Health, and a team of researchers conducted a randomized trial of micronutrients using doses of vitamins A, B-complex, C, E, and selenium or placebo in 887 patients receiving tuberculosis therapy, who were then followed for a median of 43 months; 471 were HIV-coinfected and not receiving antiretroviral therapy and 416 were HIV-uninfected.

The study showed that micronutrient supplementation was associated with reduced rates of TB recurrence. In the study, both HIV-infected and uninfected patients with pulmonary TB who were receiving the supplements had a decreased risk of TB recurrence during the next few months after the TB culture had become negative: 45 percent overall and

63 percent in HIV-infected patients. Supplementation also reduced the incidence of peripheral neuropathy by 57 percent, irrespective of HIV status, and increased the levels of certain cells (CD3 and CD4) important in immune response in HIV-uninfected patients.

As Villamor noted, "We found that providing micronutrients to patients with tuberculosis who were undergoing anti-TB treatment appeared to decrease the risk of recurrences. This effect was stronger in patients infected with HIV than in those who were HIV-negative. This could be relevant because TB reactivation is common among HIV-infected persons." Villamor further noted, "that it will be important to find out whether micronutrients improve the outcome of TB treatment in TB-HIV co-infected patients who are undergoing antiretroviral therapy."

Christine Stabell Benn, MD, and colleagues in Copenhagen noted in their accompanying editorial that results to date relating to TB recurrence and mortality are inconsistent, with previous studies using different dosages and combinations of micronutrients. Dr. Stabell pointed out that the promising results of the Villamor study show that further investigations are needed to develop optimal combinations of micronutrients that can be provided inexpensively in TB therapy to reduce relapses and increase survival.

Source: Infectious Diseases Society of America

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