



CORRESPONDENCE

Pyridoxine for patients suffering from drug-susceptible tuberculosis in India

M. Bhargava,^{1,2} A. Bhargava^{2,3}<http://dx.doi.org/10.5588/pha.18.0017>

Isoniazid (INH) is known to cause interference with vitamin B6 metabolism, leading to the deficiency of this micronutrient and resultant peripheral neuropathy. A guidance document for nutritional care and support for patients with tuberculosis (TB), published in 2017 in India,¹ recommended a dose of 10 mg pyridoxine. This is higher than the usual recommended dietary allowance, keeping in view the INH used in the treatment regimen.¹ Although the 2013 World Health Organization guidelines did not mention dosage, they recommended pyridoxine supplementation with INH-containing treatment regimens for all pregnant and lactating women, as well as for people with conditions such as human immunodeficiency virus (HIV) infection, alcohol dependence, malnutrition, diabetes mellitus (DM), chronic liver disease or renal failure, without making specific reference to drug susceptibility status.²

The current (2016) Indian technical operational guidelines recommend the addition of 50 or 100 mg pyridoxine for drug-resistant TB (DR-TB) adults weighing 16–25 kg and ≥ 26 kg, respectively.³ However, there is no such recommendation for drug-susceptible TB patients. The technical guidelines published in 2005 clearly mentioned that patients at risk of INH-induced peripheral neuropathy, such as those with alcohol dependence, malnutrition and DM, should be administered 10 mg pyridoxine as prevention. It also recommended routine administration of pyridoxine in communities with poor health and nutritional status, irrespective of drug susceptibility status.⁴ The result was that pyridoxine was prescribed routinely to all patients, irrespective of drug susceptibility status, until the 2016 guidelines came into effect in India.

The frequency of peripheral neuritis ranges from 2% to 44% in HIV-negative individuals, and is four-fold higher among those with HIV co-infection.⁵ Other comorbidities, such as undernutrition, alcohol dependence and DM, are also not infrequent among Indian patients: a third of adult men and women were found to have chronic undernutrition (body mass index [BMI] < 18.5 kg/m²) according to the 2005–2006

National Family Health Survey.⁶ In a large cohort study in rural India, BMI was < 16.0 kg/m² in half of adult males, and < 15.0 kg/m² in adult females.⁷ A study from South India suggests that almost half of patients with TB either have DM or are pre-diabetic.⁸

To make TB treatment truly patient-centred, it is important for the nutrition component to be constantly kept in mind at policy level, at the very least to prevent drug-induced problems leading to possible loss to follow-up and resultant drug resistance. The additional cost of providing 10 mg of pyridoxine, when weighed against the benefits, is irrelevant from both the patient and the programme perspective. Pyridoxine should be prescribed to all patients, irrespective of their drug susceptibility status.

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AFFILIATIONS

- 1 Department of Community Medicine, Yenepoya Medical College, Mangalore, India
- 2 Centre for Nutrition Studies, Yenepoya University, Mangalore, India
- 3 Department of Internal Medicine, Yenepoya Medical College, Mangalore, India

CORRESPONDENCE

Madhavi Bhargava
Department of Community Medicine
Yenepoya Medical College
University Road
Deralakatte, Mangalore,
Karnataka 575018
India
e-mail: madhavi.bhargava@yenepoya.edu.in

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