

中文題目：潛伏性結核單一處方引起之抗藥性肺結核-個案報告

英文題目：Acquired Resistance to Isoniazid during the Course of Isoniazid Monotherapy for Latent Tuberculosis Infection: a Case Study

作者：李宗倫<sup>#1</sup>，詹岱華<sup>3</sup>，王成蕙<sup>2,4,5</sup>，周如文<sup>3,6</sup>，余明治<sup>1,2,7</sup>，李枝新<sup>\*1,2,8</sup>，林翊嫻<sup>2</sup>

服務單位：<sup>1</sup>臺北醫科大學附屬萬芳醫院內科，<sup>2</sup>臺北醫科大學附屬萬芳醫院肺研究中心，

<sup>3</sup>臺灣疾病控制中心，<sup>4</sup>臺北醫科大學附屬萬芳醫院檢驗醫學，<sup>5</sup>臺北醫科大學醫學科技學院醫

學檢驗科學與生物技術學院，<sup>6</sup>國立陽明大學微生物學與免疫學研究所，<sup>7</sup>臺北醫科大學醫學

院附屬呼吸治療學院<sup>8</sup>，臺北醫科大學醫學院附屬醫學院內科肺科

## Introduction

Of those screened positive for LTBI, 5-10% will develop active TB in the future, and preventing this progression remains an urgent public health goal to reduce TB transmission by implementation of adequate prevention treatment. A recent cohort study of over 8000 subjects starting LTBI treatment reported 0.28% cases developed active TB during, or soon after the treatment, and acquired drug resistant was unlikely. A course of nine months of isoniazid, three months of isoniazid plus rifapentine, or four months of rifampicin monotherapy is advised for LTBI patients, in line with recommendations of the World Health Organization.

## Case presentation

We present a subject of LTBI with history of contact with a rifampicin resistant-TB patient. The LTBI subject received isoniazid monotherapy as standard preventive measure, and later progressed into active disease with pronounced resistance to both rifampicin and isoniazid, suggesting that the later drug resistance should have been acquired during the LTBI treatment.

## Discussion

In summary, we presented a rifampicin-resistant pulmonary TB contact, diagnosed and treated as LTBI with isoniazid monotherapy on the basis of a positive IGRA test and no evidence of clinical nor radiological presentations indicative of active TB. However, with a presumptive effective regimen and high compliance under directly observed treatment program, her progression to active TB with acquired resistance to isoniazid was unexpected. Our report should raise concern to the possibility of acquired-drug resistant bacteria over the course of LTBI therapy, and therefore, development of a more accurate testing method, as well as diagnostic and therapeutic guidelines for further investigation of bacterial burden and clinical disease states should be of great importance.

## Keyword:

Latent Tuberculosis Infection (LTBI), treatment, acquired drug resistance, multi-drug resistant