Giant Tuberculin Reaction Associated With the Homeopathic Drug Tuberculinum: A Case Report

Ekaterini Syrigou,[1] Ioannis Gkiozos,[2] Ioannis Dannos,[2] Dimitra Grapsa,[2] Sotirios Tsimpoukis,[2] and Konstantinos Syrigos[2]

[1]Allergy Department and [2]Oncology Unit GPP, "Sotiria" General Hospital, Athens School of Medicine, Athens, Greece

Giant reactions to the tuberculin skin test are extremely rare and have been previously reported almost exclusively in patients with lepromatous leprosy. We herein report a giant tuberculin reaction associated with the homeopathic drug Tuberculinum in a patient with no evidence of active tuberculosis or leprosy.

Keywords. BCG vaccination; giant reaction; tuberculosis; tuberculin skin test.

The tuberculin skin test (TST) is the most widely used screening tool for the detection of latent tuberculosis. Skin reaction to intradermal injection of tuberculin, a purified protein derivative (PPD) of tubercle bacilli, is based on the induction of a delayed-type hypersensitivity response in subjects presensitized to mycobacterial antigens [1]. According to the latest guidelines and recommendations by the American Thoracic Society and the Centers for Disease Control and Prevention, a cutoff point of 15 mm should be used for separating positive from negative skin reactions to tuberculin in low-risk groups (patients from low-incidence regions, with no history of tuberculosis contact, immunosuppression, or other known risk factor for tuberculosis) [1].

Giant reactions to tuberculin, defined as accelerated and exaggerated responses typically exceeding 40 mm in diameter, are extremely rare and have been previously reported almost exclusively in individuals with lepromatous leprosy [2, 3] and only occasionally in patients with active tuberculosis [2, 4]. To the best of our knowledge, large tuberculin reactions in the absence of active mycobacterial infection have been previously reported only as a result of inadvertent injection of vaccine instead of a PPD product [5]. We report a tuberculin reaction of 100 mm in diameter, associated with administration of Tuberculinum, a homeopathic drug prepared from tuberculous tissue, in a patient with no evidence of active mycobacterial infection. A propos of this case, the need for improved safety and quality control of homeopathic medicines prepared from potentially hazardous biological materials is also briefly discussed.

CASE REPORT

A 43-year-old man presented to the Allergy Department at "Sotiria" General Hospital, Athens, Greece, with a 10-week history of intermittent cough, wheezing, and dyspnea following a viral upper respiratory infection. The patient had been diagnosed with bronchial asthma 3 years earlier, which was well controlled under a combination of maintenance and symptomatic treatment as needed (montelukast/formoterol) until about 1 year prior to presentation. At that time, the patient discontinued conventional therapy in favor of alternative treatment options (homeopathy) for his asthma symptoms. At presentation, physical examination was unremarkable, except for mild bilateral wheezing on forced expiration. Chest radiographic and complete blood count results were within normal limits. The erythrocyte sedimentation rate and C-reactive protein level were normal (9 mm/hour and 2 mg/L, respectively). The patient had a documented history of Bacille Calmette-Guerin (BCG) vaccination received 23 years ago, as evidenced by immunization records and a visible BCG scar. He had no demographic, occupational, or other known risk factors for tuberculosis (eg, immunosuppression, positive human immunodeficiency virus status, recent tuberculosis contact, or recent travel to an endemic country). Screening for latent tuberculosis was nonetheless recommended prior to treatment initiation, due to recent studies suggesting that the risk of developing active tuberculosis among patients with respiratory diseases may be exacerbated by use of inhaled corticosteroids [6]. After obtaining the patient's consent, a TST was administered by intradermal injection of 0.05 mL (5 tuberculin units [TU]) of PPD (PPD RT-23, 10 TU/0.1 mL, Statens Serum Institut, Copenhagen, Denmark) into the volar forearm, using the Mantoux method. The skin test result was read 48 hours later as a very strong positive reaction with a redness of approximately 117 mm and an induration

Received 15 October 2013; accepted 6 January 2014; electronically published 14 January 2014.

Correspondence: Dimitra Grapsa, MD, PhD, Oncology Unit GPP, "Sotiria" General Hospital, Mesogion 152, 115 27 Athens, Greece (dimgrap@yahoo.gr).

Clinical Infectious Diseases 2014;58(7):e119–21

DOI: 10.1093/cid/ciu023