THE DARK SIDE OF NITROFURANTOIN; A CASE OF GIANT CELL INTERSTITIAL PNEUMONIA FROM CHRONIC NITROFURANTOIN THERAPY

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Introduction

Nitrofurantoin is commonly used for the treatment and prophylaxis against recurrent urinary tract infections. Its various pulmonary side effects have been recognized previously. Here, we report a case of histopathologically proven presentation of Giant cell Interstitial Pneumonia in a patient treated chronically with Nitrofurantoin therapy.

Case Report

A 64-year-old Caucasian Female presented to the Pulmonary Clinic with a three month history of progressive dyspnea. Her past medical history comprised of radiation cystitis and recurrent urinary tract infections (UTI) as a complication of radiation therapy for endometrial carcinoma. She was being treated with Nitrofurantoin for UTI prophylaxis for the past two years.

There was no prior history of occupational exposures or smoking. On examination, she was afebrile and hypoxic with an oxygen saturation of 86% on room air. Bibasilar end inspiratory crackles were present. Computed tomography (CT) of the chest revealed bilateral patchy ground-glass opacities along with reticulation and minimal honeycombing. Pulmonary function tests revealed a forced vital capacity (FVC) of 1.90 and forced expiratory volume (FEV1) of 1.63. A clinical diagnosis of Nitrofurantoin toxicity was made and the drug was discontinued immediately. She was started on a 60 mg of prednisone orally. On routine follow up, the patient continued to have symptoms with little or no symptomatic or radiological improvement. She was prescribed home oxygen. A bronchoalveolar lavage (BAL) was performed. Cultures from the BAL were negative for aerobic culture, acid fast bacilli, Pneumocystis jiroveci, and Legionella pneumophila. A right thoroscopic lung biopsy showed Giant cell Interstitial Pneumonia.

Follow Up

At a five month follow up, the patient had improved exercise tolerance and a resting oxygen saturation of 94%. Subsequent FVC and FEV1 were 2.03 and 1.70 respectively.

Discussion

The common pulmonary complications of nitrofurantoin which include eosinophilic pneumonitis and hypersensitivity reactions have been well established[1]. However, this case illustrates a rare manifestation of severe pulmonary toxicity as Giant Interstitial Pneumonia (GIP)[2]. GIP is commonly associated with heavy metal toxicity [3]. and its association with Nitrofurantoin is uncommon. Due to the prevalent use of Nitrofurantoin as prophylaxis for recurrent UTIs in primary care patient population, knowledge and early recognition of this potentially fatal toxicity is necessary. The outcomes are favorable with discontinuation of Nitrofurantoin.

References