The Brazilian Journal of
INFECTIOUS DISEASES
www.elsevier.com/locate/bjid

Letter to the Editor

Rifampin induced angioedema: a rare but serious side effect

To the Editor

The treatment of latent tuberculosis is part of the strategy to eliminate tuberculosis (TB) in low incidence countries.[1] Ten to 15 million people in the United States have latent TB, and about 300,000 Americans are treated for it each year.[2] The currently recommended treatments for latent TB include using the drugs isoniazid, rifampin, and rifapentine plus isoniazid.[3,4]

Rifampin was discovered in 1957 and became a standard treatment for tuberculosis years later. Although it is often associated with drug interactions, rifampin is generally a safe drug. Its most common serious side effects are hepatic and immunologic. The immunologic side effects range from flu-like syndrome to shock. Other immunologic side effects include thrombocytopenia, gastrointestinal symptoms, rash and cutaneous leukocytoclastic vasculitis.[5] However, to the best of our knowledge, the association between angioedema and rifampin has never been reported. We observed a case of angioedema related to the use of rifampin.

A 62-year-old woman was a close contact of a patient with active sputum positive TB. She had a positive Quantiferon test and no evidence for active disease. She had never taken rifampin before. She had hypertension and hyperlipidemia and took metoprolol 25 mg, atorvastatin 20 mg, calcium and vitamin D, and a multivitamin daily. She began rifampin 600 mg daily. Four days later, she developed mild itching that did not respond to diphenhydramine. Twenty-three days later, her lips and eyelid swelled and she developed a generalized rash. She was admitted to the hospital for angioedema. No abnormality was found in routine laboratory tests. She recovered 2 days after stopping rifampin. Her latent tuberculosis was later treated with isoniazid.

In this patient, angioedema developed about a month after starting rifampin and recovered soon after its discontinuance. There was no eosinophilia associated with the reaction. Possible rifampin-associated angioedema was questioned previously, but data have not strongly supported it.[6] The pathogenesis of rifampin-induced angioedema is not clear. It may be a non-immunoglobulin E (IgE) mediated mechanism with an imbalance in the arachidonic acid cascade, increasing of leukotrienes or bradykinin-mediated.[7] We alert readers to this adverse effect of a widely prescribed drug to avoid serious outcomes. Rifampin-induced angioedema is a life threatening side effect; therefore, rifampin should not be readministered.

Conflicts of interest

The authors declare no conflicts of interest.

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Received 19 August 2013
Accepted 27 August 2013
Available online 22 November 2013

1413-8670

http://dx.doi.org/10.1016/j.bjid.2013.08.001