CASE REPORT

An Unrecognised Adverse Drug Reaction of Enalapril Led to Suspicion of Pulmonary Tuberculosis Infection

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In December 2011, a 57-year-old man presented with chronic dry cough at one of the clinics in the Copperbelt province for his routine medical review for essential hypertension. The blood pressure control was satisfactory on a combination of anti-hypertensive medications namely hydrochlorothiazide 25mg, atenolol 50mg and enalapril 20mg. All medications were taken orally once daily and his blood pressure was well controlled. However, the patient had a complaint of persistent dry cough. The cough started in March 2010, soon after commencing enalapril as an add-on medication.

The patient received many treatment regimens for his cough but without improvement. The treatments included many anti-tussives and anti-biotic regimens since March 2010. In October 2011, a suspicion of pulmonary tuberculosis (PTB) infection was made and the patient underwent several laboratory investigations including chest x-ray, sputum test for acid fast bacilli and erythrocyte sedimentation rate. None of the investigations performed had suggested PTB infection. The only additional complaint was occasional mild chest pains due to the cough. Other constitutional symptoms of PTB infection such as malaise, weight loss and night sweats were absent.

In December 2011, the patient attended the clinic where the dry cough was recognised, by the attending clinical staff, as an adverse drug reaction (ADR) to enalapril. The patient was advised to discontinue taking enalapril. Few days later, the patient returned to the clinic and reported that the cough had resolved spontaneously within 48 hours of stopping taking enalapril. His blood pressure remained stable, even at the time of writing this report, without further adjustments to another drug combination. The patient was extremely happy as he had become very anxious of the cough especially that the cause was unidentified.

COMMENTS

A dry, persistent cough is a well-described adverse reaction of the angiotensin-converting enzyme inhibitor (ACE-I) medications,[1,2]. However, delays of diagnosis[3], misdiagnosis and mistreatment of ACE-Is induced cough [4] have been reported. The clinical staff who recognised the dry cough as an ADR to enalapril had just attended an in-house training on how to manage hypertension in adult patients. During the training session, recognition of ADRs to commonly used anti-hypertensive drugs including angiotensin-converting-enzymes inhibitors (ACE-Is) was emphasised. Therefore, when the patient presented at the clinic with the complaint of a persistent dry cough, the presentation was quickly recognised as an ADR to enalapril and gave correct medical advice.

The patient was subjected to extensive and unnecessary evaluations, diagnostic tests and consultations which were costly and generated anxiety to the patient.

Some studies have noted a delay in the correct diagnosis of the side effect [3], which is possibly related to poor knowledge of the side effect and the recommended course of action [5]. In addition, physicians may attempt to treat the cough with antitussive agents [3,6] that might constitute irrational pharmacotherapy [3,6,7].

Therefore, earlier identification of the side effect and discontinuation of enalapril medication would have been cost-effective.

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RECOMMENDATIONS

This case report highlights knowledge gap regarding recognition of common ADRs to available anti-hypertensive medications at the clinic. The knowledge gap among clinical staff may be present among many clinical staff in the health facilities in Zambia. Therefore, regular in-house training of clinical staff regarding early identification and appropriate management of ADRs are essential in promoting rational prescription. In addition, regular pharmacovigilance updates in terms of commonly reported ADRs nationally would promote increased awareness of ADRs and encourage prescribers how to correctly manage common adverse drug reactions.

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