Cough-induced Rib Fracture: An Unusual Cause of Acute Chest Pain

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Cough is one of the most common symptoms for which patients seek medical assistance. Usually, patients with cough recover without significant sequelae; however, violent cough can occasionally lead to complications such as pneumothorax and rib fracture. We reported a 34-year-old man who presented to our Emergency Department with intermittent non-productive cough for 2 weeks and sudden onset of right chest pain after an episode of violent paroxysmal cough. The initial chest radiograph revealed no abnormality. The subsequent chest computed tomography demonstrated linear non-displacement fracture at lateral aspect of right seventh rib. Cough-induced fracture of the rib should be suspected in a patient who presents with prolonged or severe coughing and abrupt onset of chest pain after cough.

Key words: cough, chest pain, rib fracture

Introduction

Although rib fractures are often related to blunt chest trauma, only few reports discuss rib fracture secondary to coughing\textsuperscript{(1-5)}. Because cough-induced fractures often occur simultaneously with an underlying disorder, initial diagnosis is often difficult\textsuperscript{(6)}.

Case Report

A 34-year-old man was brought to the emergency department (ED) for evaluation of severe right chest pain for two hours and cough for 10 days. He was not seized with whooping cough, persistent paroxysmal cough, or post-tussive vomiting. He had undergone several general physical examinations without significant findings. Approximately two hours prior to presentation, he felt a sudden severe sharp pain over the anterolateral aspect of his right chest wall after a violent paroxysmal cough. The chest pain over the anterolateral aspect of the right chest wall became worse while he was bending forward during coughing. He denied having any significant medical history or having undergone any trauma. On arrival in the ED, his blood pressure was 118/72 mm Hg, with a heart rate of 90 beats per minute and a respiratory rate of 18 breaths per minute. He had severe chest pain along with localized tenderness, but no palpable crepitus. His biochemical profile, coagulation function, cardiac makers, and platelet count were within the reference ranges. No remarkable findings were noted on chest radiography (Fig. 1). He was treated...