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Case Report

A 68-Year-Old Man Presenting to the ER with Sudden Dyspnea, A Rare Case of Snowstorm View in the Right Ventricle during Echocardiography

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Abstract

Pulmonary Thromboembolism (PTE) is a fatal condition and the third leading cause of hospital-related deaths. We present a case of acute PTE in a 68 year-old man with dyspnea. Patient had a history of bone malignancy. Bedside echocardiography revealed snowstorm view in the right ventricle. Patient was treated with 10 units reteplase intravenous bolus. Echocardiography was repeated and no signs of snowstorm view were detected. Finally, patient died of cardiogenic shock and massive PTE. In this case we report snowstorm view during echocardiography which is rare and should be considered in clinical assessment of PTE.

Introduction

Pulmonary Thromboembolism (PTE) is the third leading cause of cardiovascular death worldwide [1]. Smoking cigarettes, malignancies, obesity, age, heredity, prolonged comorbidities, and surgical history are known risk factors for PTE [2,3]. PTE can present with common symptoms that can be misdiagnosed as other critical or non-critical diseases [1,4]. Some of the symptoms includerespiratory distress, chest pain, presyncopeor syncope, and bloody sputum [2,5,6]. Echocardiography in patients with PTE may represent different views; however, a snowstorm view in the ventricle is rare to report since yet.

Herein, we report a rare case of PTE with a snowstorm view in the right ventricle during echocardiography.

Case Presentation

A 68 year-old Caucasian man without a history of cardiovascular or pulmonary diseases presented to the Emergency Room (ER) with sudden onset of dyspnea. He was a known case of bone cancer with metastasis to the peritoneum and was undergoing chemotherapeutic treatment. Physical examination revealed edema in the right lower extremity. His Heart Rate (HR) was 125 beats/min, with Blood Pressure (BP) 80/60 mmHg, oxygen saturation (SpO2) 65% and had no fever. Laboratory examinations, including complete blood cell count, diff, creatinine, blood urea nitrogen and electrolytes were within the normal range. Except a two plus positive C-reactive protein was reported. D-dimer was requested, but wasn't reported until the patient was in the ER. Bedside echocardiography revealed Right Ventricle (RV) enlargement and a snowstorm view in the RV and inferior vena cava (Figure 1). The patient was subsequently treated with 10 units of a reteplase intravenous bolus over 2 min. Echocardiography was repeated 30 minutes after injection and no snowstorm view was detected again. However, no change was observed in RV size. The patient was intubated because of worsening dyspnea. Forhypotension, 15mcg/min norepinephrine and 500cc normal saline serum were administered. Nevertheless, BP did not improve. Finally, after 3.5 hours patient died in the ER due to the massive PTE.

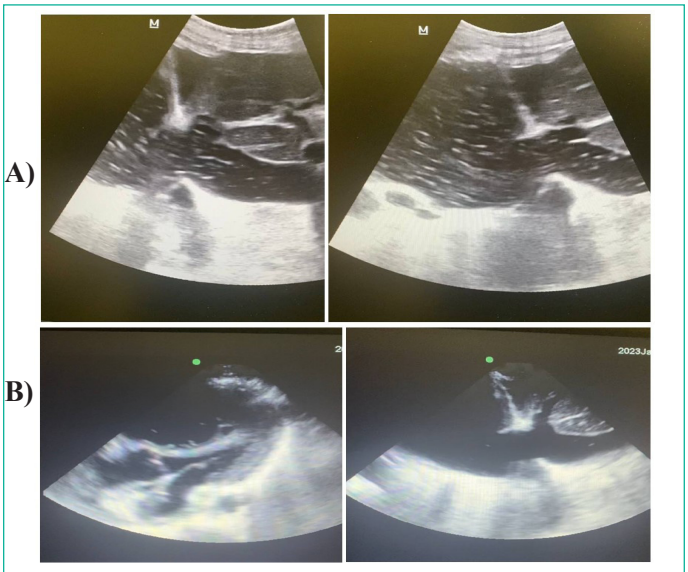

Figure 1: Bedside echocardiography. Before (A) and after (B) thrombolytic therapy.

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