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Massive Hemoptysis and Recurrent Infective Endocarditis in Intravenous Drug user: A Case Report

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Abstract

Intravenous drug use (IDU) poses a high risk of serious complications such as infective endocarditis (IE), which carries high morbidity and mortality rates. Mycotic pulmonary artery aneurysms (MPAA) are rarely associated with right-sided IE, especially in the setting of IDU. It is a potentially fatal complication as it can lead to severe hemorrhage if the aneurysm ruptures. We report the case of a young male with a history of current IDU and tricuspid valve replacement post complicated IE 2 years ago. The patient initially presented with massive hemoptysis and fever. Chest computed tomography (CT) showed a lobulated lesion in the right lower lobe with clear continuation to the pulmonary vessels. We aim to draw attention to the magnitude of complications of active IDU, including massive hemoptysis due to MPAA which should be promptly identified and emergently managed with embolization or surgery, followed by counseling and rehabilitation to minimize the risk of recurrence and save these patients.

Keywords: Intravenous drug use, Infective endocarditis, Mycotic pulmonary artery aneurysms

1. Introduction

Infective endocarditis (IE) is a major cause of morbidity and mortality in the setting of intravenous drug use (IDU). The right side of the heart is more commonly affected, with a specific predisposition for tricuspid valve involvement. Septic emboli can form and dislodge to the pulmonary artery causing potentially serious complications. This includes pneumonia, pulmonary abscess, pulmonary infarction and mycotic pulmonary artery aneurysm (MPAA). In rare cases, rupture of a MPAA can lead to fatal hemorrhage – unless detected early and managed appropriately. We report a case of recurrent IE in a patient with an active history of IDU, presenting to our hospital with massive hemoptysis due to a ruptured MPAA.

2. Case Presentation

A 37-year-old male with an active history of IDU and alcoholism presented with a two day history of low-grade fever and an episode of massive hemoptysis. The hemoptysis was characterized as being bright red in color and approximately 350 mL in volume. Surgical history was significant for open-heart surgery two years prior for tricuspid valve replacement due to infective endocarditis. On admission, he was febrile (38.4 °C), but hemodynamically stable. On general inspection, the patient was jaundiced with a visible sternotomy scar on the chest. Basal lung crackles were appreciated on auscultation.