

UCLA

UCLA Previously Published Works

Title

Bilateral Pneumothorax: A Rare But Serious Complication Of Septic Pulmonary Embolism

Permalink

<https://escholarship.org/uc/item/04q9f299>

Journal

CHEST Journal, 146(4)

ISSN

0012-3692

Authors

Sani, Sasan
Kamangar, Nader

Publication Date

2014-10-01

DOI

10.1378/chest.1994803

Peer reviewed

Bilateral Pneumothorax: A Rare But Serious Complication Of Septic Pulmonary Embolism

Sasan Sani, MD; Nader Kamangar, MD
UCLA - Olive View Medical Center, Los Angeles, CA

Chest. 2014;146(4_MeetingAbstracts):142A. doi:10.1378/chest.1994803

Abstract

SESSION TITLE: Infectious Disease Cases I

SESSION TYPE: Affiliate Case Report Slide

PRESENTED ON: Sunday, October 26, 2014 at 10:45 AM - 12:00 PM

INTRODUCTION: Pneumothorax as a complication of septic pulmonary embolism (SPE) has been described in only a few case reports. We report an unusual case of a patient who presented with SPE and resultant bilateral pneumothoraces.

CASE PRESENTATION: A 28 year-old female with squamous cell carcinoma of the base of her tongue, with prior glossectomy, radiation, and chemotherapy through a peripherally inserted central catheter (PICC), presented with cough, shortness of breath, and fevers. On presentation she required intubation. Thoracic imaging revealed PICC associated thrombosis of the left axillary, innominate and internal jugular veins and right lower lobe pulmonary emboli. Also noted were multiple bilateral cavitory lesions at varying stages of maturity consistent with SPE. Furthermore, CT demonstrated a left sided hydropneumothorax. Broad spectrum antibiotics were initiated and she underwent chest tube thoracostomy. The patient's PICC was removed and anticoagulation was started. Her course was complicated by the development of a right sided tension pneumothorax, requiring emergent chest tube placement as well as septic shock. The patient's family requested to pursue comfort measures and the patient subsequently passed away.

DISCUSSION: SPE has an insidious onset and patients usually present with fever, respiratory symptoms, and lung infiltrates. CT findings include peripheral nodules and subpleural lesions, many of which have identifiable "feeding" vessels. SPE can be associated with pleural effusion, empyema, abscess formation, and hemoptysis. Pneumothorax, however, is a rare complication of SPE, with only 7 previously reported cases, of which 5 were related to intravenous drug use and one was secondary to an indwelling catheter. Only one patient suffered bilateral pneumothoraces. We hypothesize that the rupture of the subpleural emboli can create communications between the airway and pleura resulting in pneumothoraces, which can lead to tension physiology in patients on positive pressure ventilation.

CONCLUSIONS: Although rare, SPE should be considered in the differential of a patient presenting with pneumothoraces and bilateral peripheral pulmonary nodules. It is conceivable that pneumothorax associated with SPE is an under-reported complication with serious and, at times, lethal ramifications.

Reference #1: A case of pneumothorax secondary to septic pulmonary embolism due to central venous catheter infection caused by methicillin-resistant *Staphylococcus aureus*. Hashimoto Y et al. *Kansenshogaku Zasshi.* 2008 Jan;82(1):51-4

DISCLOSURE: The following authors have nothing to disclose: Sasan Sani, Nader Kamangar

No Product/Research Disclosure Information