

Pneumomediastinum Associated with Pneumonitis

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SUMMARY

The abnormal presence of air or other gases in the center of the chest and between the lungs (Mediastinum) is called pneumomediastinum, which can be spontaneous or secondary forms. Secondary occur with a specific pathologic event, such as trauma. Spontaneous pneumomediastinum (SPM) is a rare condition, without any definite etiology. The most common symptoms of the disease include chest pain, dyspnea and subcutaneous emphysema, which can usually be detected by chest radiography. Although Pneumomediastinum is a rare condition and self-limiting and usually treated, but in young people with sudden onset of chest pain, we should recognize it from other diseases. Here, we would like to report one case of a 20-year-old woman with chief complain of breath shortness, dyspnea, single coughs.

Keywords: Pneumomediastinum, Spontaneous pneumomediastinum, Mediastinal emphysema, Chest pain

INTRODUCTION

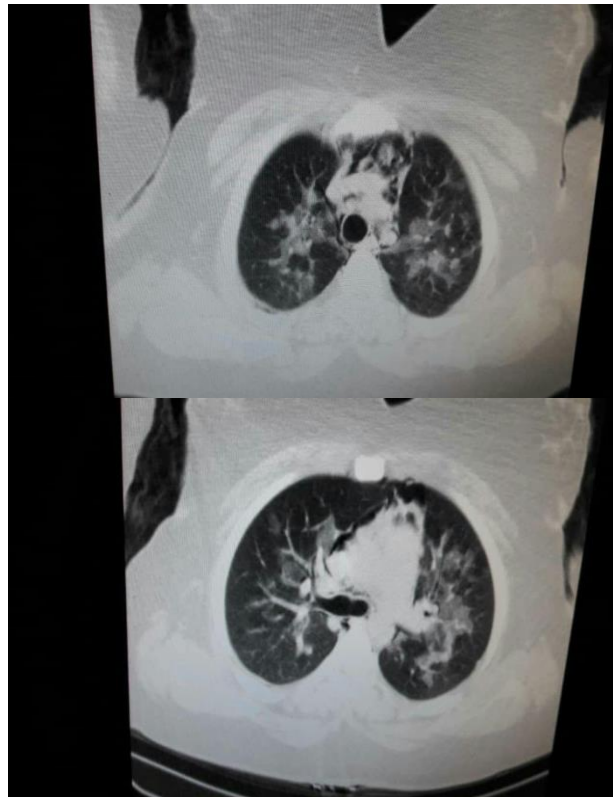
The abnormal presence of air or other gases in the center of the chest and between the lungs (mediastinum) is called Pneumomediastinum (PM), or mediastinal emphysema, which can be spontaneous or secondary. perforations of the esophagus, trachea, and bronchi, retroperitoneum after perforation of an abdominal viscus, wounds caused by tracheostomy, operative procedures in the neck and buccal cavity, are the ways that air may gain access to the mediastinum. Secondary pneumomediastinum occurs with several factors. Spontaneous pneumomediastinum (SPM) is a very rare condition, without any special symptoms. it is usually benign, and self-limited, that primarily affects young adults and the most common clinical symptoms are Chest pain, dyspnea, and subcutaneous emphysema^{1,2,3,4}. Patients with SPM usually have a history of asthma, inhalation of cocaine, methamphetamine, oxidative, marijuana or hydrocarbons^{3,5}. frontal chest roentgenogram and some of its symptoms can be used to diagnose the disease(7). according to the low prevalence and importance of considering spontaneous in the differential diagnosis of patients referred to the emergency department with acute chest pain, we will continue to introduce a patient in this field.

CASE PRESENTATION

A 20-year-old woman, with chief complain of breath shortness referred. the patient had dyspnea, single coughs with yellow sputum, tachypnea, tachycardia and, fever. These symptoms become sever one day before administration. She intakes 5 dose penicillin, one cefazolin and 5 dexamethasones by her diagnoses. She was

addicted to tobacco and hubble-bubble. there was no history of allergies to foods or medications. The patient had a history of pleuritic chest pain before this. The patient had not any lung disorder morbidity or mortality in her family history.

Fig. 1: Chest CT scan revealing air in the mediastinum



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There was no history of trauma. In the vital signs tests the pressure of CO_2 was high (53.4 mmHg) and other signs were normal. In physical examination lungs had bilateral sounds, other physical examinations were normal. On the laboratory tests, the patient just had high WBC (16.6×10^3) and the urine test was normal. Chest CT was performed, which confirmed the existence of pneumomediastinum and pneumonitis observed.

DISCUSSION

Spontaneous pneumomediastinum, also known as Hamman's syndrome, who first described it in 1939^{8,9}. SPM is a very rare condition that occurs due to the presence of air in the mediastinum in a patient with no known underlying pulmonary disease. The incidence of it is less than 1:44,000¹⁰. SPM is a self-limiting and benign disease that is usually treated after a few days of rest and under care and administration of antibiotics¹¹. Tobacco and cocaine use, particularly in patients who intake them regularly, is one of the causes of this complication, that there are a number of reported cases. Our patient was addicted to Hubble bubble. Considering the result of previous studies and other similar cases, this can be one of the main causes of this complication². Also, cocaine has direct toxic effects on lung tissue, which can cause serious damage⁸. Chest pain is the most common presenting symptom in SPM, and also other symptoms include, dyspnea and cough, voice distortion (as with helium) and subcutaneous emphysema, specifically affecting the face, neck, and chest¹². The best way to diagnosing Pneumomediastinum is chest radiographs or CT scan, that help us to find signs and symptom such as demonstrating free air tracking along the mediastinum, spinnaker sail sign or angel wing sign¹³. This case chest radiography CT study was performed, due to the history of chest pain. In the CT image of our patient, in the CT image of our patient, the pneumonitis and presence of air in the mediastinum were clearly visible.

CONCLUSION

Although Pneumomediastinum is a rare condition and self-limiting and benign disease that is usually treated after a few days of rest, but in young or middle-aged people with sudden onset of chest pain, we should recognize PM from

other diseases as an important and treatable differential diagnosis.

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