



Sore Throat: Clue for Spontaneous Pneumomediastinum

Boğaz Ağrısı: Spontan Pnömomediastinum İçin İşaret

Vehbi Özyayın¹, Fatma Sarı Doğan¹, Merve Demireller¹, Ümit Ölmez¹, Özlem Güneysel²

¹Department of Emergency Medicine, Medeniyet University Training and Research Hospital, İstanbul, Turkey
²Department of Emergency Medicine, Kartal Lütfi Kırdar Training and Research Hospital, İstanbul, Turkey

ABSTRACT

Introduction: Spontaneous pneumomediastinum was described by Louis Hamman in 1939. For this reason, it is named Hamman's syndrome. It often occurs in young patients. Patients frequently heal without any complications.

Case Report: In this article, a case of spontaneous pneumomediastinum with atypical presentation is presented.

Conclusion: Patients who are admitted to the emergency department with sore throat should be examined carefully, and spontaneous pneumomediastinum should be kept in mind in the differential diagnosis.

Keywords: Spontaneous pneumomediastinum, sore throat, Hamman's syndrome

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ÖZET

Giriş: Spontan pnömomediastinum 1939 yılında Louis hamman tarafından tanımlanmıştır. bu sebepten hamman sendromu olarak adlandırılır. Genelde genç yaştaki kişileri etkiler. Hastalar sıklıkla komplikasyonsuz olarak iyileşir.

Olgu Sunumu: Bu yazıda atipik presentasyonla başvuran spontan pnömomediastinum olgusu sunulmuştur.

Sonuç: Boğaz ağrısı ile acil servise başvuran hastalarda fizik muayene dikkatli yapılmalı, ayırıcı tanılar arasında spontan pnömomediastinum akılda tutulmalıdır.

Anahtar Kelimeler: Spontan pnömomediastinum, boğaz ağrısı, Hamman sendromu

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Introduction

Spontaneous pneumomediastinum (SPM) is defined by the appearance of free air in the mediastinum without any specific reason. SPM is named Hamman's syndrome in the literature, since the first known cases were published by Louis Hamman in 1939. The pathophysiology of SPM was clarified by M.T. and C.C. Macklin in 1944 (1) and is suggested to be an alveolar rupture secondary to elevated intrathoracic pressure. As a result, air dissects along the bronchovascular tree, and free air penetrates into the mediastinum (1, 2).

In some cases published in the literature, intermingling of triggering factors and predisposing factors of SPM is reported. Asthma, interstitial lung diseases, smoking, use of inhaled drugs, and use of inhaled irritants facilitate the development of pneumomediastinum, whereas factors increasing intrathoracic pressure, such as cough, vomiting, defecation, and asthma attack, worsen pneumomediastinum (2, 4, 5).

The most frequent clinical symptoms of SPM are thoracic pain, subcutaneous emphysema, and dyspnea. Other symptoms include cough, dysphagia, odynophagia and fever. The most frequent one of these symptoms is subcutaneous emphysema. The sound of systolic crackles in the left sternal border is named Hamman's sign, but it is seen in only 20% of patients (1, 3).

Address for Correspondence/Yazışma Adresi:

Vehbi Özyayın, Department of Emergency Medicine, Medeniyet University Training and Research Hospital, İstanbul, Turkey.
Phone: +90 216 551 00 74 E-mail: vozaydin@hotmail.com

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Among patients with upper respiratory infection, the most common reason for presenting to an emergency service is sore throat (6). Patients presenting to an emergency service with sore throat are discharged after an oropharynx examination, followed by appropriate treatment (6).

In this case, a patient who had presented to the emergency service with sore throat and was diagnosed as spontaneous pneumomediastinum based on the results of the examination is discussed. The reports on spontaneous pneumomediastinum in the literature are generally related to the common and known causes of the disease. Therefore, we present a case here, wherein a patient had presented to the emergency service with a less common symptom and was diagnosed as spontaneous pneumomediastinum.

Case Report

A 23-year-old male patient, with no known medical history and no regular medicine use, presented to the emergency service with sore throat without thoracic pain or difficulty swallowing. He had a history of smoking 60 cigarettes a day. He did not have a history of any trauma or dental intervention. Oxygen saturation, measured by pulse oximetry, was 98%, blood pressure was 113/73 mm Hg, respiratory rate was 14 per minute, body temperature was 36.7°C, and heart rate was 67 beats per minute. Auscultation of lungs showed equal breath sounds bilaterally without any additional findings. The oropharynx was normal. During the lymph node examination, subcutaneous emphysema was detected on the right side of the neck. Chest x-ray showed subcutaneous emphysema over the right chest wall (Fig. 1). Thereafter, a computed tomographic scan of the thorax clearly revealed subcutaneous emphysema but ruled out pneumothorax (Fig. 2). Prophylactic antibiotic therapy was initiated in the emergency room. Then, he was admitted to the thoracic surgery department for further examination and treatment, based on the decision taken in consultation with a thoracic surgeon. During hospitalization, bronchoscopy and endoscopy were carried out to search for the source of free air. On the fifth day of the hospital stay, regression in emphysema was observed. He was finally diagnosed with spontaneous pneumomediastinum, since the source of free air in the mediastinum could not be detected. He was discharged without any problems. He could not be traced, because he lives abroad.

Discussion

Spontaneous pneumomediastinum is defined by the presence of free air in the mediastinum without any specific reason. Secondary pneumomediastinum occurs as a result of a secondary reason, generally trauma (1, 2, 4).

Although some patients present to hospitals with frightening symptoms, such as subcutaneous emphysema, thoracic pain, and dyspnea, it is a self-limited condition with a good prognosis (1, 2). Complete recovery of patients is generally achieved through treatment options, such as oxygen therapy and bed rest

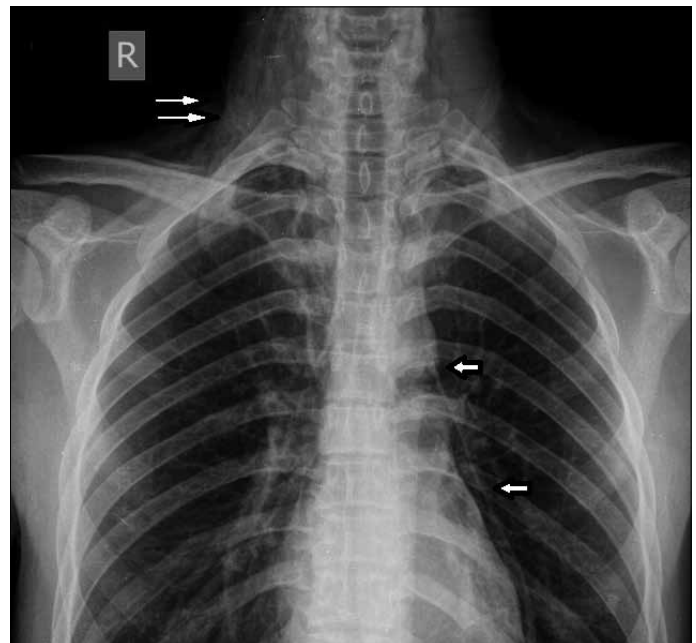


Figure 1. Subcutaneous emphysema in soft tissue on the right and signs of pneumomediastinum on the left (arrows)

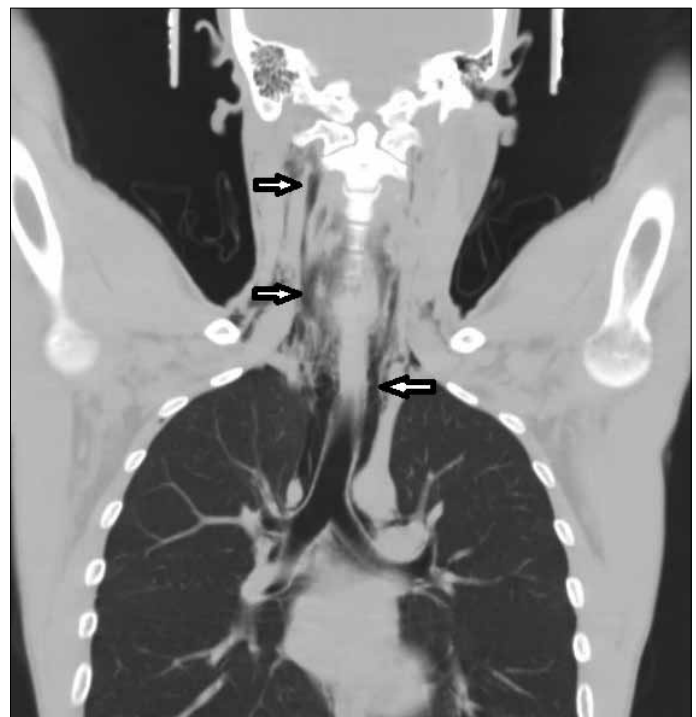


Figure 2. Computed tomography scan reveals subcutaneous emphysema (arrows)

(1). Antibiotics may be used for suspicion of mediastinitis or for prophylactic reasons (1, 2, 5). In this case, prophylactic antibiotic therapy was carried out.

In our case, even though the only triggering factor was the smoking history of the patient, we considered that cough, together with sore throat, might have triggered the said condition. In fact, cough has

been reported as one of the most common triggering factors in the literature, as well (1, 2, 7, 8).

Chest x-ray and computed tomography are radiological examinations facilitating the diagnosis. Routine chest x-rays are recommended for young patients with unexplained chest pain (2). Computed tomography is accepted as the gold standard for determination of free air in the mediastinum (2).

Although bronchoscopy and endoscopy are not recommended at the early stages of diagnosis, they can be useful for detecting the source of free air in the mediastinum (4, 7).

Conclusion

Sore throat is a common complaint for admissions to the emergency room. Emergency department physicians should evaluate the existence of subcutaneous emphysema over the neck with sore throat. Spontaneous pneumomediastinum should be considered in the differential diagnosis of patients with this complaint.

Informed Consent: Informed consent was not taken because the patient lives abroad.

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