



Internal Medicine Flashcard

Extra-tracheal air

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1. Indication

A previously healthy 18-year-old male was presented with chest pain and shortness of breath for 1 day. He had developed a respiratory tract infection with severe cough and sputum production a few days earlier. There was no history of trauma or foreign body ingestion and physical examination was unremarkable. The findings at chest X-ray and computed tomography are shown in Fig. 1.

What is the diagnosis?

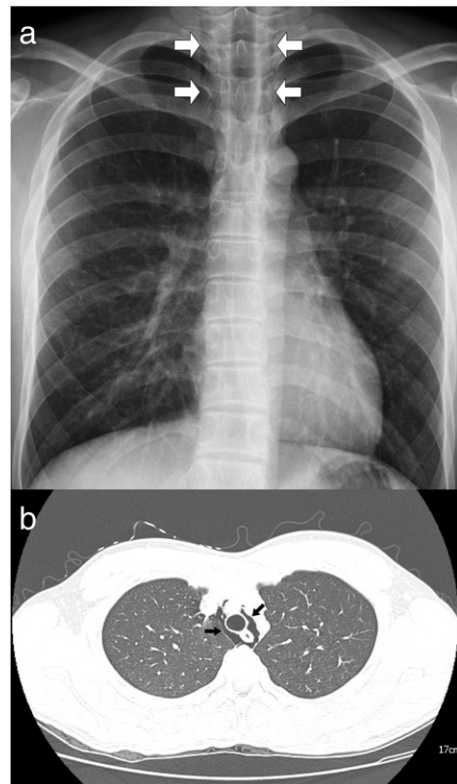


Fig. 1. (a) Chest radiograph shows air column around the trachea in the mediastinum (arrows). (b) Computed tomography indicates the presence of interstitial air surrounding the structures within the mediastinal pleura (arrows).

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2. Diagnosis

A chest radiograph revealed an air column around the trachea (Fig. 1a). Computed tomography indicated the presence of interstitial air surrounding the structures within the mediastinal pleura (Fig. 1b). We reached a diagnosis of spontaneous pneumomediastinum. The patient underwent conservative treatment and his symptoms improved without recurrence.

Spontaneous pneumomediastinum is characterized by the presence of interstitial air in the mediastinum without a confirmed etiology such as trauma, hollow organ perforation, iatrogenic injury, or surgery. This disorder was described by Louis Hamman in 1939; therefore, it is also called as Hamman's syndrome [1]. Similar to spontaneous pneumothorax, this condition is also predominant in young males. The accepted pathophysiology is that severe cough induces alveolar rupture as a result of high intra-alveolar pressure, low peri-vascular pressure, or both, which was known as the Macklin phenomenon [2]. There was no specific precipitating factor, and chest pain and dyspnea were the most common symptoms. Isolated spontaneous pneumomediastinum is rare because many cases are associated with subcutaneous emphysema. Treatment includes analgesia, rest, and/or initial oxygen therapy. The prognosis is generally good and recurrence is rare.

Conflict of interests

There are no competing interests.

Contributorship

Hsiang-Ling Chen and Te-Chun Shen wrote the report.
Te-Chun Shen provided case details and planned the report.
Chih-Yen Tu supervised the report.

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