

DIAGNOSIS

Spontaneous pneumomediastinum or Hamman's syndrome

The chest X-ray revealed subcutaneous emphysema and a pneumomediastinum (*figure 1*). Computed tomography confirmed an extensive pneumomediastinum as well as subcutaneous emphysema together with ground glass opacities (*figure 2*). There were no signs of esophageal rupture. Echocardiography showed air artefacts around the pericardium.

Hamman's syndrome is named after Louis Hamman and describes subcutaneous emphysema in association with a spontaneous pneumomediastinum.¹ Pneumomediastinum can be categorized as a primary or spontaneous pneumomediastinum and a secondary pneumomediastinum. There is no obvious cause for a spontaneous pneumomediastinum, whereas trauma or injury is the underlying cause of a secondary pneumomediastinum. A primary pneumomediastinum is a rare phenomenon with an incidence of approximately 1 in 25,000 and predominantly affects males,² and several mechanisms are described to explain its development. A sudden increase in alveolar pressure due to coughing can cause a rupture of the alveolar wall causing air to leak through the surrounding bronchovascular sheath.^{2,3} Air trapping, similar to asthma, also contributes to the development of high alveolar pressure. Apart from barotrauma, weakening of the alveolar wall can contribute to the occurrence of a pneumomediastinum.⁴ Viral pneumonitis also causes the alveolar walls to weaken,⁴ as do the use of drugs, such as cannabis and MDMA.^{2,3} Our patient was diagnosed with Influenza type A, suffered from asthma and was known to use both cannabis and MDMA.

Figure 2. A coronal slide of the CT scan of the chest with air around the mediastinum (red arrow) and ground glass opacities



REFERENCES

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4. Niehaus M, Rugso A, Roth K, et al. Retropharyngeal air and pneumomediastinum: a rare complication of influenza A and asthma in an adult. *Am J Emerg Med*. 2016;34:338.e1-e2.