

Pneumomediastinum Secondary to Cocaine Use

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Abstract

Case Report

Spontaneous pneumomediastinum (SPM) and subcutaneous emphysema are rare complications of illicit drug abuse. Thorough history, examination, and investigations are required to rule out fatal complications such as oesophageal perforation. We present a case of a 22 year-old male presenting with pleuritic chest pain one day after cocaine inhalation and ingesting ecstasy. Conservative supportive management is appropriate when this occurs spontaneously without radiological evidence of visceral perforation.

Keyword: Pneumomediastinum, cocain.

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INTRODUCTION

Spontaneous pneumomediastinum is rare. It is defined by the presence of air in mediastinal structures for no apparent cause. The growing use of cocaine in our country is a little-known contributing factor. We report the case of a patient who presented with isolated pneumomediastinum after cocaine use.

CASE REPORT

A 22-year-old man consults the emergency room for a feeling of chest tightness and blockpnea onset suddenly the day before, at rest, associated with a feeling of swelling of the face gradual worsening. This patient has no medical and surgical history and is not taking any treatment. His hemodynamic is stable (arterial pressure at 125/75 mmHg, heart rate at 65 / min), the patient is eupneic (respiratory rate at 12 / min,

oxygen saturation at 100% in ambient air), afebrile (36.5 ° C) and his consciousness is normal (Glasgow score of 15). The sounds of the chest are regular, without audible breath, and there is no sign of right or left heart failure. Lung auscultation is clear and symmetrical, without abnormal noise. Clinical examination found subcutaneous emphysema (typical snowy crepitation) bilateral thoracocervical and left arm. His EKG is normal. The frontal chest X-ray (Fig. 1A) confirms the diffuse subcutaneous emphysema and reveals a pneumomediastinum, without associated pneumothorax. The biological assessment is without anomaly. A thoracic computed tomography (CT) without injection (Fig. 1B) confirms the diagnosis of isolated pneumomediastinum with extensive subcutaneous bilateral thoracocervicofacial emphysema of the soft facial, cervical parts and axillary regions with no obvious etiology identified.



Fig-1: Marked subcutaneous emphysema is associated with marked pneumomediastinum, small right pneumothoraces. No apical lung bullae/blebs and no signs of rib/lung trauma

Interrogation does not find any notion of trauma or vomiting efforts. On the other hand, the patient admits the consumption of cocaine ("sniff") the day before the onset of symptoms. After specialist advice, the patient is transferred to a thoracic surgery department for monitoring. Endoscopy, performed to remove a tracheobronchial breach, is normal. L evolution was spontaneously favorable quickly and allows a return home within 48 hours

DISCUSSION

Spontaneous pneumomediastinum is rare. It is defined by the presence of air in the mediastinal structures with no apparent cause (trauma, iatrogenia). Cocaine use is one of the triggers described in the literature [1, 2]. These are most often young men, with no previous history, who smoked (68%) or snorted (32%) cocaine. Symptoms appear between a few seconds and three days after consumption, most often within the first 12 hours. Chest pain, retrosternal and sudden onset, is the most common symptom, present in 60 to 88% of patients [1-6]. Dyspnea is present in 26 to 58% of cases. Neck pain, odynophagia and dysphagia are each present in about a quarter of patients. The other symptoms are rarer, the sensation of cervical "swelling" n ' being described only in 7% of cases. subcutaneous emphysema n ' is not systematic, it is found in 42 to 68% of patients. The Hammam sign, a sound of synchronous crepitation of the audible heartbeats in the precordial region, and considered as pathognomonic of pneumomediastinum, is present in a quarter of cases [1, 4]. Chest x-ray is sufficient usually to make the diagnosis, the CT allowing to l ' affirm, possibly d ' define it ' etiology, and d ' eliminate d ' other associated gas effusions. In fact, spontaneous pneumomediastinum can sometimes be associated with pneumothorax, pneumopericardium, pneumorachis or pneumoperitoneum [1]. In case of isolated pneumomediastinum without sign of severity, it is not necessary to perform endoscopic explorations outside of ' a traumatic context, iatrogenic (surgical or endoscopic complication, endotracheal intubation, mechanical ventilation), or suggestive of a break esophageal (Boerhaave syndrome, neoplasia) or tracheobronchial tree (neoplasia, infection, underlying lung disease) [6]. Predictors of injury α esophageal are the presence of ' an effusion pleural or vomiting preceding symptomatology [4]. Apart from these situations and in the case of isolated pneumomediastinum, the complications are exceptional, and it seems that the majority of patients do not require treatment' hospitalization [3-5]. Treatment is symptomatic and no specific treatment seems necessary. L ' oxygen therapy is not systematic although ' it would accelerate the

resorption of pneumomediastinum (absorption of free air through the ' increased nitrogen concentrations), and ' Systematic antibiotic therapy seems unnecessary [1, 3, 6]. Evolution is spontaneously favorable in a few days, and recurrences are exceptional. The physiological mechanism most often described is a rupture of the alveolar wall by the phenomenon of hypertension, favored by some men α Intentional respiratory works (of the Valsalva type) intended to accelerate the ' absorption of cocaine in order to increase its psychic effects [1, 3]. If the alveolar breach takes place in a peripheral region close to the pleura, the consequence will be pneumothorax. If it takes place in a pulmonary territory near the hilum, the ' air will diffuse along the Broncho vascular axes to the mediastinum, there by creating a pneumomediastinum. This phenomenon is called Macklin effect [1, 5]. other authors evoke an intrinsic toxicity of cocaine, responsible for diffuse lesions of the pulmonary parenchyma, including at the alveolar level [2].

CONCLUSION

In conclusion, cocaine consumption should be systematically researched during the interrogation of a patient with isolated pneumomediastinum without signs of severity. Its existence could prevent hospitalization or seemingly excessive endoscopic explorations

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