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Intra-Alveolar Hemorrhage of Unusual Etiology

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Abstract

Cannabis use is steadily increasing worldwide and is an emerging public health problem. This consumption is responsible for harmful respiratory effects, including intra-alveolar hemorrhage. We report the case of a 26-year-old man admitted with exertional dyspnea and profuse hemoptysis. Investigations revealed intra-alveolar hemorrhage. Immunological and tuberculosis tests were negative. When the case history was taken again, it was noted that the patient had been a regular cannabis user for several years, and the blood and urine tests for toxic substances revealed the presence of tetra-hydro-cannabinoids. This case illustrates the seriousness of respiratory complications caused by cannabis, and highlights the need to emphasize the importance of weaning and educating young people.

Keywords: cannabis, intra-alveolar hemorrhage, vasculitis

1. Introduction

Cannabis use is steadily increasing worldwide and constitutes an emerging public health problem. This consumption is responsible for respiratory adverse effects including intra-alveolar hemorrhage. We report a new case.

2. Observation

A 26-year-old patient, a 15PA smoker with no previous pathological history, was admitted to the hospital with exertional dyspnea that had been evolving for one month. He also reported an episode of profuse hemoptysis on the day of hospitalization. Physical examination revealed tachycardia at 130 beats/min, blood pressure at 9/6 and respiratory rate at 25 cycles/min. Pulmonary auscultation showed bilateral crackling rales. The rest of the examination was unremarkable. Arterial blood gases showed PH 7.42, PCO2 38 mm Hg, PO2 64 m Hg, bicarbonates 25 mm Hg and oxygen saturation 92%. Hemoglobin was 11/dl, white blood cells 10300 cells/mm 3 and platelets 299,000 cells/mm 3. Liver and kidney function tests were normal, as were prothrombin levels and partial thromboplastin time. Intradermal tuberculin reaction was negative.

The immunological workup was negative for anti-nuclear antibodies, anti-glomerular basement membrane antibodies and neutrophil cytoplasm antibodies. Serum complement was normal. Sputum and bronchial fluid were negative for BK. Cardiac ultrasound was without abnormalities. The chest X-ray showed bilateral alveolar opacities, and the CT scan showed a ground-glass appearance and diffuse pan-lobular condensation with a clear proximal predominance, respecting the peripheries. Bronchial fibroscopy revealed an inflammatory mucosa, and systematic biopsy revealed numerous siderophages without granulomas or signs of malignancy. Bronchoalveolar lavage also revealed siderophages. On further history-taking, the patient reported regular cannabis use for several years, and blood and urine toxicity tests revealed the presence of tetra-hydro-cannabinoids. The diagnosis of cannabis-induced intra-alveolar hemorrhage was accepted.

Toxic eviction and psychiatric counseling are indicated. The clinical course was favorable after a three-week follow-up, and a follow-up chest CT scan was scheduled.

3. Discussion

In our case, alveolar hemorrhage syndrome was suggested by the classic clinical triad of respiratory failure, hemoptysis and anemia, as well as the ground-glass appearance on chest CT (F Grassin, F André, B Rallec, E Combes, U Vinsonneau & N Paleiron, 2011). Bronchoalveolar lavage confirmed the diagnosis with the presence of siderophages. In our patient, the absence of other systemic signs and the negativity of the immunological work-up ruled out the diagnosis of vasculitis or connective tissue disease. A cardiac or infectious cause or a blood craze disorder were also ruled out (Z. Moatemri, H. Zaibi, S. Dabboussi, S. Mhamedi, C. Aichaouia, M. Khadhraoui & R. Cheikh, 2016; J. Delourme, C. Delattre, P. Godard, F. Steenhouwer & N. Just, 2009). In our case, the diagnosis of intra-alveolar hemorrhage due to cannabis was also evoked in view of the favorable evolution after eviction of the toxic substance and the absence of recurrence of the hemorrhage. However, cannabis smoke alone has only exceptionally been incriminated in the occurrence of alveolar hemorrhage, and it is rather linked to the mode of consumption of cannabis such as the combination of cocaine and additives and adulterated cannabis (M. Monfort, A. Larakeb & F. Gouraud, 2013).

4. Conclusion

This observation illustrates the seriousness of cannabis use, which can be responsible for alveolar hemorrhage and acute respiratory distress. Management of this addiction requires a multidisciplinary approach, based on educating young people from school age.

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