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When the High Leads to Air Leak: Spontaneous Pneumomediastinum from Cannabis Use

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INTRODUCTION

Spontaneous pneumomediastinum (SPM) is the presence of free air in the mediastinum without trauma, procedures, or infection. It is more common in young adults and is associated with activities that raise intra-alveolar pressure, such as coughing, vomiting, or Valsalva manoeuvres. Inhalational drug use, particularly cannabis, has been increasingly linked to SPM due to inhalation techniques that promote barotrauma. We present a case of SPM in a young male with cannabis exposure, who presented with behavioural symptoms.

CASE DESCRIPTION

A 23-year-old Indian male presented to the Emergency Department with three days of aggressive behaviour and hallucinations. He had no known comorbidities, denied illicit drug use, but admitted to smoking and alcohol consumption. There was no history of trauma. On arrival, he was afebrile, not in respiratory distress but appeared agitated. Vital signs were stable: BP 129/71 mmHg, HR 71 bpm, SpO_2 99% on room air, dextrostix 8.4 mmol/L. Physical examination revealed crepitus over the neck and supraclavicular area. The trachea was central with normal breath sounds. Chest X-ray and CT thorax images as attached (Image 1-4). Urine drug screening was positive for tetrahydrocannabinol (THC). The patient was admitted to surgical ward. Inpatient OGDS were normal. Serial chest X-rays showed stable findings, and he was subsequently discharged after 5 days.

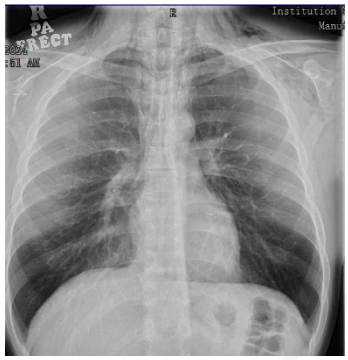


Image 1: Chest X-ray upon presentation

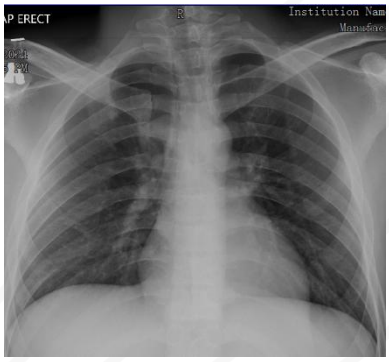
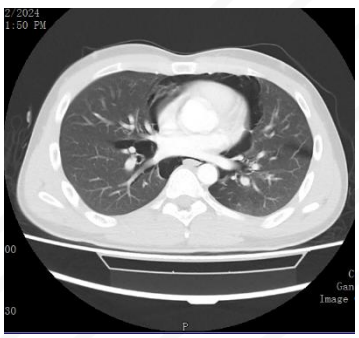


Image 1: Chest X-ray prior to discharge



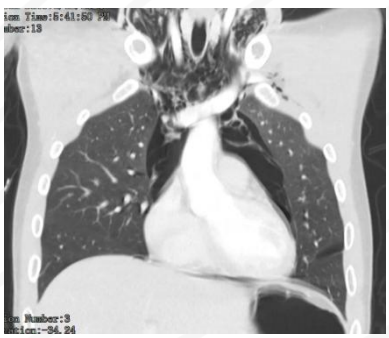


Image 3 & 4: CT Thorax showing extensive pneumomediastinum with subcutaneous emphysema

DISCUSSION

SPM is a rare but recognized complication of cannabis use, often due to breath-holding and inhalation techniques that increase intrathoracic pressure. While it may present with chest pain or dyspnea, it can also be asymptomatic or discovered incidentally. In stable patients, further imaging is crucial to exclude oesophageal or tracheobronchial injury. Management is typically conservative.

CONCLUSION

With increasing cannabis use, clinicians should consider SPM in young patients with atypical presentations. Early recognition prevents misdiagnosis and ensures appropriate management.

References

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Keywords: Pneumomediastinum, cannabis, substance abuse