

Abstract

Case Report: A case of Cannabis smoking Induced Leukocytosis

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Background:

Leukocytosis relates to infections, malignancies, stress response, and multiple intoxicants. Like other intoxicants, cannabis smoking can result in a persistent leukocytosis. Here we report a case of cannabis-induced leukocytosis.

Case Presentation:

A 20-year-old Hispanic female with a history of anxiety disorder presented with 3-days of nausea, vomiting, and colicky abdominal pain. She endorsed heavy marijuana smoking as self-medication and compulsive hot showers for symptom relief. She was admitted for oral intake intolerance, concerning for cannabis hyperemesis syndrome. Her history demonstrated multiple admission for cannabis hyperemesis syndrome during which she demonstrated a leukocytosis which improved with abstinence of marijuana. Her prior hematology workup was unremarkable. Upon admission, vital signs and physical exam were normal. Labs were significant for a neutrophil predominant (77.2%) leukocytosis (WBC: 26.2). The infectious workup including chest x-ray, urinalysis, blood cultures and inflammatory markers were unremarkable. Peripheral smear revealed a neutrophilic leukocytosis without blasts or immature cells attributable to inflammation. Off antibiotics her leukocytosis improved, her recovery was uneventful, and was discharged home.

Conclusion:

A neutrophil predominant leukocytosis can relate to heavy marijuana smoke inhalation. It has been suggested that pro-inflammatory chemicals and systemic inflammation generated from smoking marijuana cause these hematologic changes. Our case emphasizes considering heavy cannabis use among the differential for leukocytosis and recommending cannabis abstinence once other etiologies are ruled out.