Outcomes of Acute Necrotizing Pancreatitis and Associated Fluid Collections in Cannabis Users

Miguel Salazar, MD, MPH1; James S. Ramey, MD2; Jodie A. Barkin, MD3; Rudolf Kamapley, MD4; Isaac Paintsil, MBChB, MPHP1; Jamie S. Barkin, MD, MACG5; C. Roberto Simon-Lourenco, MD, MS6.

1Cleveland Clinic, Cleveland, OH; 2University of Miami Miller School of Medicine, Miami, FL; 3Cook County Health and Hospital Systems, Chicago, IL; 4Cook County Health and Hospital Systems, Chicago, IL; 5Cleveland Clinic, Cleveland, OH.

INTRODUCTION: Acute necrotizing pancreatitis is associated with high rates of organ failure and mortality. Cannabis use has been associated with acute pancreatitis, but the role of cannabis and factors associated with its use remain poorly understood. We aimed to evaluate the impact of cannabis use on the incidence of acute pancreatitis and study the associations with acute pancreatitis outcomes.

METHODS: We conducted a retrospective cohort study of all consecutive patients admitted with acute pancreatitis at a large tertiary referral center from 01/01/2012 to 04/30/2018. The primary outcome was the presence of acute pancreatitis, and secondary outcomes were hospitalization, organ failure, and mortality.

RESULTS: Five hundred and nineteen patients were included, from which 107 (20.6%) were cannabis users. A total of 69 patients developed acute necrotizing pancreatitis; 58 (84%) were non-cannabis users (NCU) and 11 (16%) were CU. A total of 109 patients with moderate-severe acute pancreatitis developed pancreatic/peripancreatic fluid collections, 92 (84.4%) were NCU and 17 (16.6%) were CU. Acute necrotizing pancreatitis outcomes: CU were more likely to have persistent SIRS (18.2% vs. 12.1%) and to require ICU (63.6% vs. 43.1%), they were also less likely to have infected necrosis (9.1% vs. 31.7%), bactemia (18.2% vs. 31%), to require debridement of necrosis (9.1% vs. 32.8%). CU with any pancreatic/peripancreatic fluid collection were more likely to have AKI (47.1% vs. 26.1%). CONCLUSION: Cannabis users with acute necrotizing pancreatitis or fluid collection are more likely to have persistent SIRS, AKI and require ICU. However, they’re less likely to have infected necrosis/ fluid collections, bactemia and to require pancreatic/peripancreatic fluid debridement. This is a pioneer study to investigate the clinical impact of cannabis use in acute pancreatitis, including outcomes and severity in patients with pancreatic necrosis and pancreatic/peripancreatic fluid collections.

Comparison and Outcomes of Cannabis Users With Acute Pancreatitis According to Severity Using the Revised Atlanta Classification of Acute Pancreatitis

Miguel Salazar, MD1; Jodie A. Barkin, MD2; James S. Ramey, MD3; Rudolf Kamapley, MD3; Isaac Paintsil, MBChB, MPH1; Jamie S. Barkin, MD, MACG5; C. Roberto Simon-Lourenco, MD, MS6; John H. Stroger, Jr. Hospital of Cook County, Chicago, IL; University of Miami Miller School of Medicine, Miami, FL; Baylor College of Medicine, Houston, TX; Cook County Health and Hospital Systems, Chicago, IL; Cleveland Clinic, Cleveland, OH.

INTRODUCTION: Cannabis remains the most widely and commonly used substance in the world. There is conflicting data regarding its effects on Acute Pancreatitis. Aims with this study is to investigate the clinical effects of cannabis use and to compare outcomes in cannabis users (CU) vs. non-cannabis users according to acute pancreatitis severity.

METHODS: Retrospective design study was conducted on a cohort of patients admitted with acute pancreatitis between January 2012 to April 2018 at a large tertiary hospital in Chicago, IL. Cannabis users were identified via recorded history, urine toxicology or both. Patients who were over 18 years of age at the time of the study and had an episode of acute pancreatitis were included, patients who were pregnant were excluded. Severity of acute pancreatitis was assessed using the revised Atlanta Classification for acute pancreatitis. Multivariable logistic regression model was constructed using STATA software version 13 (STATA Corp LLC, College Station, Texas, USA).

RESULTS: Five hundred nineteen patients were included, from which 107 (21%) were CU. 65 (61%) had mild acute pancreatitis and 42 (39%) had moderate or severe pancreatitis. Mild acute pancreatitis outcomes: CU were more likely to have AKI (aOR 5.7, P < 0.001), to come back to ED for recurrent acute pancreatitis after discharge (aOR 2.77, P = 0.006), multi-organ failure (aOR 2.43, P = 0.006). Moderate or Severe acute pancreatitis outcomes: CU were more likely to have AKI (aOR 1.8, P = 0.017) and less likely to have infected necrosis or any pancreatic fluid collection (aOR 0.15, P = 0.018), to require debridement (aOR 0.45, P = 0.057), to have bactemia (aOR 0.27, P = 0.066). CONCLUSION: This is one of the largest studies investigating the clinical effects of cannabis in patients with AP. We found significant difference in AP outcomes according to the severity. CU had higher incidence of AKI either during a mild or moderate/severe pancreatitis attack and were more likely to have recurrent pancreatitis that requires ED visit or re-hospitalization. Interestingly, CU were less likely to have pancreatic necrosis, fluid collection, and bactemia. Further prospective studies are needed to investigate the acute and long-term factors of cannabis consumption and its impact on AP course and outcomes.

Drug-Induced Pancreatitis: A Retrospective Cohort Study on Incidence, Etiology, Presentation and Outcomes

Miguel Salazar, MD, Chimezie Nwobi, MD, Mohamed A. Elhady, MD, MS; Madhu Mathew, MD, Rudolf Kamapley, MD, Isaac Paintsil, MBChB, MPH; C. Roberto Simon-Lourenco, MD, MS; John H. Stroger, Jr. Hospital of Cook County, Chicago, IL; Cook County Health and Hospital Systems, Chicago, IL; Cleveland Clinic, Cleveland, OH.

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