



American Heart Association®

Scientific Sessions

Session LF.MDP45 - Cannabis, Sleep, and the Environment: Risk for Cardiovascular Disease

MDP249 - Increased Risk of Major Adverse Cardiac and Cerebrovascular Events in Elderly Non-Smokers With Cannabis Use Disorder: A Population-Based Analysis

📅 November 13, 2023, 2:00 PM - 2:05 PM

📍 Moderated Digital Posters 2, Science and Technology Hall, Level 2

Topics

+18.124 Substance Use and CVD: Nicotine, Marijuana and Other Drugs,,

Keywords

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Authors

Avilash Mondal, Nazareth Hosp, Philadelphia, PA; Qiming Dong, Greater Baltimore Medical Ctr, Towson, MD; Bhaswanth Bollu, All India Inst of Medical Sciences, New Delhi, India; Nimra Shafi, Bahria Univ Medical and Dental Coll, Islamabad, Pakistan; Maneeth Mylavarapu, Adelphi Univ, New York, NY; Poojan Parmar, MK Shah Medical Coll and Res Ctr, Ahmedabad, India; SRIHARSHA DADANA, Cheyenne Regional Medical Ctr, Cheyenne, WY; Abeera Kali, Reston Hosp Ctr, Manassas, VA; Muhammad Hassan Khan, Bahria Univ Medical and Dental Coll, Islamabad, Pakistan; Srija Shanker, Sree Mookambika Inst of Medical Sciences, Tamil Nadu, India; Samia butt, Univ Coll of Med and Dentistry, Lahore, Pakistan; Rupak Desai, Independent Reser, Atlanta, GA

Disclosures

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Abstract

Background: Tobacco smoking confounds CVD risk studies. No large-scale investigation has been performed yet to examine cannabis use disorder (CUD) in elderly non-smokers with established CVD risk and major adverse cardiac and cerebrovascular events (MACCE).

Methods: The National Inpatient Sample (2019) was queried using relevant ICD-10 codes to identify elderly (>65 years) admissions with established CVD risk without known tobacco use disorder and stratified into CUD and non-CUD cohorts. Logistic regression evaluated MACCE odds as primary outcomes and secondary outcomes as predictors of MACCE incidents in CUD users. $P < 0.05$ was considered significant.

Results: Of 28,535 elderly cannabis users with CVD risk and no tobacco use disorder, 13.9% reported MACCE episodes. CUD patients were more likely to be male, black, and non-electively admitted from urban teaching and Western region hospitals. AIDS, alcohol abuse, depression, uncomplicated hypertension, and drug abuse were greater in the CUD cohort, while the non-CUD group had more complicated hypertension, diabetes with and without chronic comorbidities, hyperlipidemia, obesity, thyroid issues, previous strokes, VTE, cancer. The CUD cohort reported higher MACCE (OR 1.20; 95% CI 1.11-1.29). ACM (3.3% vs. 1.7%), dysrhythmia (34.9% vs. 24.9%), acute myocardial infarction (7.6% vs. 6.0%, $p = 0.001$), transfer to other facilities (28.9% vs. 19.0%), and home health care (22.4%) compared to non-CUD cohort ($p = 0.001$). Chronic lung disease, renal disease, hypertension, and hyperlipidemia were predictors of MACCE episodes in CUD

users.

Conclusion: Even after controlling for smoking, elderly cannabis users having CVD risk had 20% more MACCE events encountered than non-users. Cannabis use in older non-smokers deserves investigation into CVD. risks

Table 1. Baseline characteristics, Outcomes of Hospitalizations With vs. Without CUD, NIS 2019				
BASELINE CHARACTERISTICS		Total Admissions with		P value
Variables		NO (n=10,680,280)	YES (n=28535)	
Age (years) at admission	Median [IQR]	77 [71-84]	69[67-72]	
Sex	Male	45.80%	69.50%	<0.001
	Female	54.20%	30.50%	
Race	White	76.40%	70.20%	<0.001
	Black	10.80%	20.10%	
	Hispanic	7.40%	5.60%	
	Asian or Pacific Islander	2.70%	0.70%	
	Native American	0.40%	1.00%	
Median household income national quartile for patient ZIP Code	0-25th	27.00%	31.60%	<0.001
	26-50th	25.50%	24.50%	
	51-75th	25.40%	24.10%	
	76-100th	22.10%	19.70%	
Non elective admission		81.80%	86.00%	<0.001
Elective admission		18.20%	14.00%	
Hypertension, complicated		39.90%	33.60%	<0.001
Hypertension, uncomplicated		44.60%	53.90%	<0.001
Hyperlipidemia		60.40%	55.50%	<0.001
Obesity		17.80%	16.40%	<0.001
Drug abuse		0.90%	33.70%	<0.001
Chronic pulmonary disease		25.20%	30.80%	<0.001
Other thyroid disorders		1.40%	1.20%	0.009
Alcohol abuse		1.80%	14.90%	<0.001
Diabetes without chronic complications		14.10%	11.40%	<0.001
Prior myocardial infarction		9.10%	11.30%	<0.001
Prior transient ischemic attack/stroke		10.80%	9.70%	<0.001
Diabetes with chronic complications		26.90%	22.40%	<0.001
Prior VTE		6.40%	5.70%	<0.001
Disposition of patient	Routine	42.60%	56.00%	<0.001
	Other transfers SNF ICF	28.90%	19.00%	
	Home healthcare	22.40%	18.80%	
Length of stay (days)	Median [IQR]	4 [2-6]	4 [2-6]	0.49
Total charges (USD)	Median [IQR]	41751 [22924-77379]	48235 [25299-90831]	<0.001
OUTCOMES				
ACM		3.30%	1.70%	<0.001
AMI		6.00%	7.60%	<0.001
Dysrhythmia		34.90%	25.90%	<0.001
Cardiac Arrest		1.10%	1.10%	0.57
Stroke		4.80%	5.20%	0.002
	Adjusted OR	95% CI Lower limit	95% CI Upper limit	P value
MACCE (ACM, AMI, CA, and stroke)	1.2	1.11	1.29	<0.001
<i>P<0.05 indicates statistical significance.</i>				
<i>Multivariable regression models were adjusted for baseline demographics, hospital level characteristics and relevant cardiac and extra cardiac comorbidities.</i>				
<i>Abbreviations: VTE Venous Thromboembolism, SNF Skilled Nursing Facility, ICF Intermediate care facility, AMI Acute Myocardial Infarction, ACM All-Cause Mortality, MACCE Major Adverse Cardiovascular Event. CA Cardiac Arrest</i>				

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