



Unwitting Adult Marijuana Poisoning: A Case Series

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Abstract

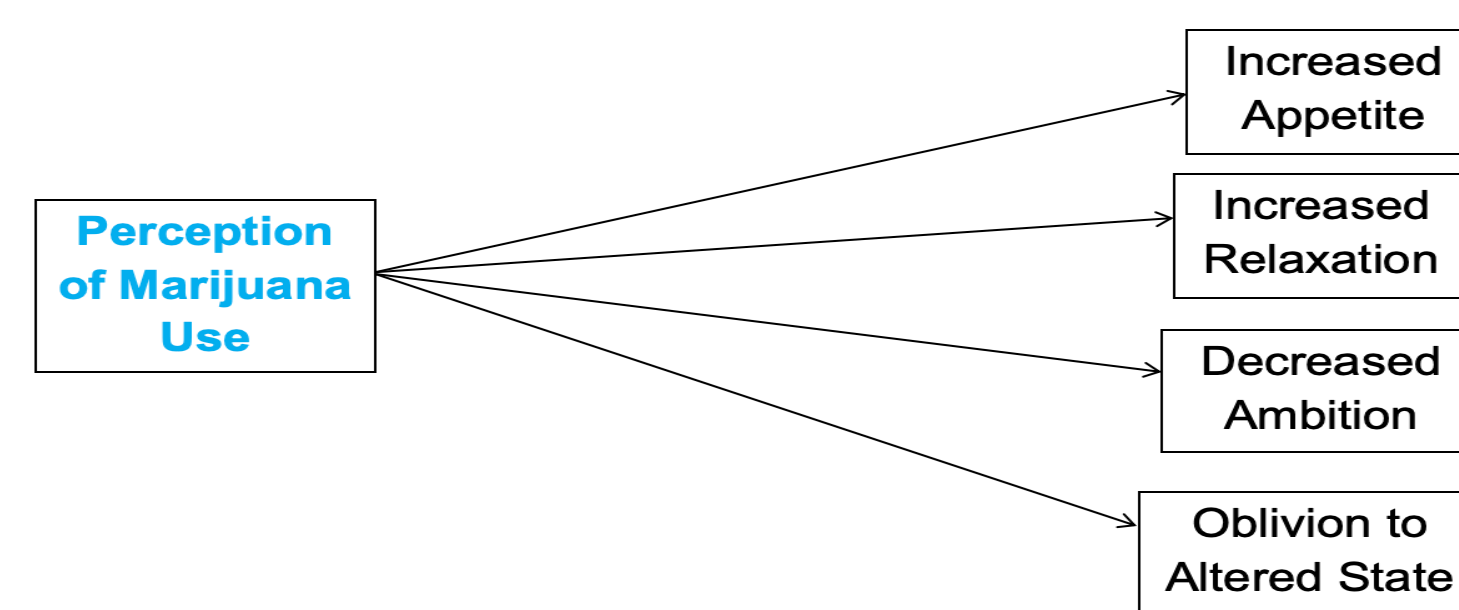
- Case of a large-scale unintentional marijuana exposure and intoxication occurring at a wedding
- 12 participants presented to the Loma Linda University Medical Center Emergency Department
- Varying symptoms included: altered mental status, aphasia, weakness, nausea, tremors, and hallucinations
- The emergency was deemed a mass casualty incident
- All patients were able to be properly assessed and no fatalities were recorded
- Marijuana was later discovered to have been served to the unaware guests at the wedding
- This incident merits timely exploration into proper management of cannabis and the ramifications of negligent distribution

Introduction

- Currently increasing the legalization of marijuana across several US States
- The incidence of ED presentations for marijuana intoxication is increasing [Wang 2018, Shen 2019, Heard 2019]
- Results in important public health implications
- Mounting evidence links higher potency marijuana to an array of adverse outcomes, especially amongst novice users [Seigny 2014]
- Despite requirements for child resistant packaging instituted in Colorado in 2014, visits to Children's Hospitals and calls to the Regional Poison Center have continued to rise [Wang 2019]
- 2.5% of children in a National Poison Data Center study demonstrated respiratory depression, coma, or seizure [Onders 2015]
- Mounting cases of unintentional pediatric exposure to marijuana are readily available
- However, minimal research has been published about the effects of accidental marijuana ingestion on previously naive adults

Methods and Materials

- Retrospective analysis of Loma Linda ED pertinent patient data and qualitative analysis of conducted interviews, 12 of which were referred to the Toxicology Service for evaluation
- Case ages ranged from 23-69 and were of Caucasian and Hispanic descent
- Screening for ethanol and toxic alcohols was performed
- Six out of the 12 subjects consented to be interviewed using a standardized interview script
- The interview recordings were software-transcribed using Temi (USA, New York) and de-identified
- Interview analysis involved identifying and grouping the patient's experiences and identifiers into common themes
- The common themes were categorized into a coding tree and refined through consensus via 3 reiterations
- Study reviewed and approved by the Loma Linda University Institutional Review Board



Results

- Eleven of the 12 subjects tested positive for tetrahydrocannabinol (THC) via urine drug immunoassay
- Five patients were noted to have tachycardia (ranging from 100 to 136 beats per minute).
- Ethanol levels of 0.021 and 0.012 mg/dL were detected in two of the 12 patients
- No patients experienced significant bradycardia, hypertension or hypotension
- Three patients were admitted to Observation with an average length of stay of 12.5 hours

Percentage of Subjects Stating an Emotion in Response to Marijuana Exposure (n = 6)

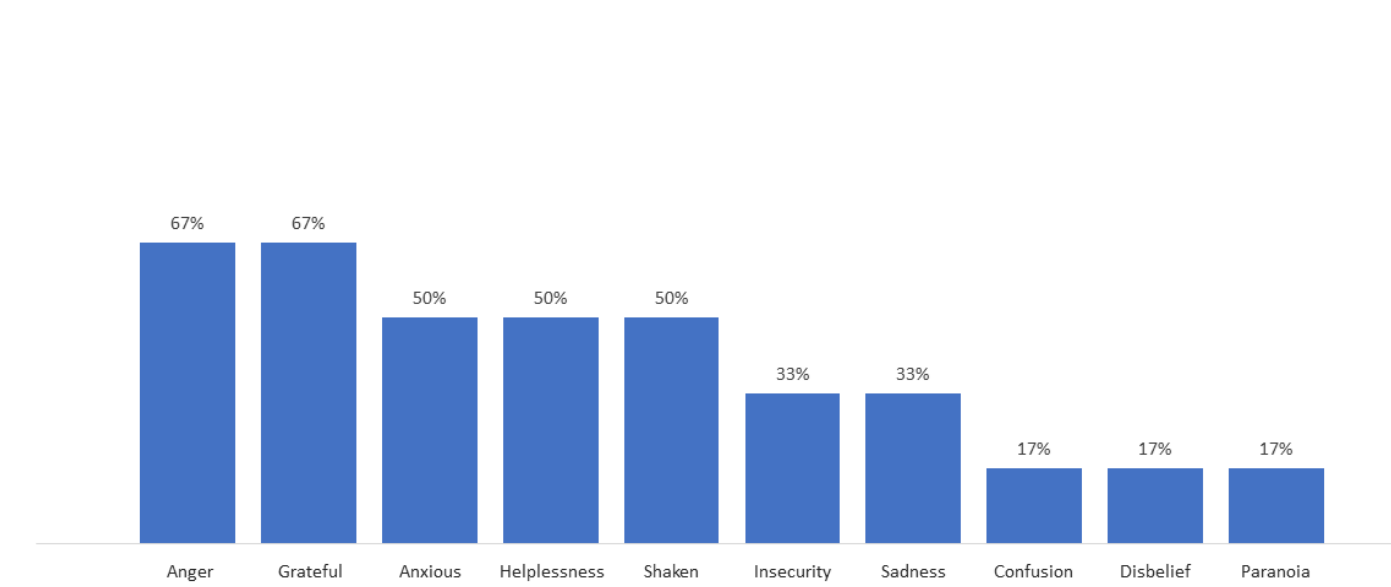


Figure 1. Patient Emotions Described in Interviews

Percentage of Subjects Experiencing Acute Symptoms (1-2 days) (n = 6)

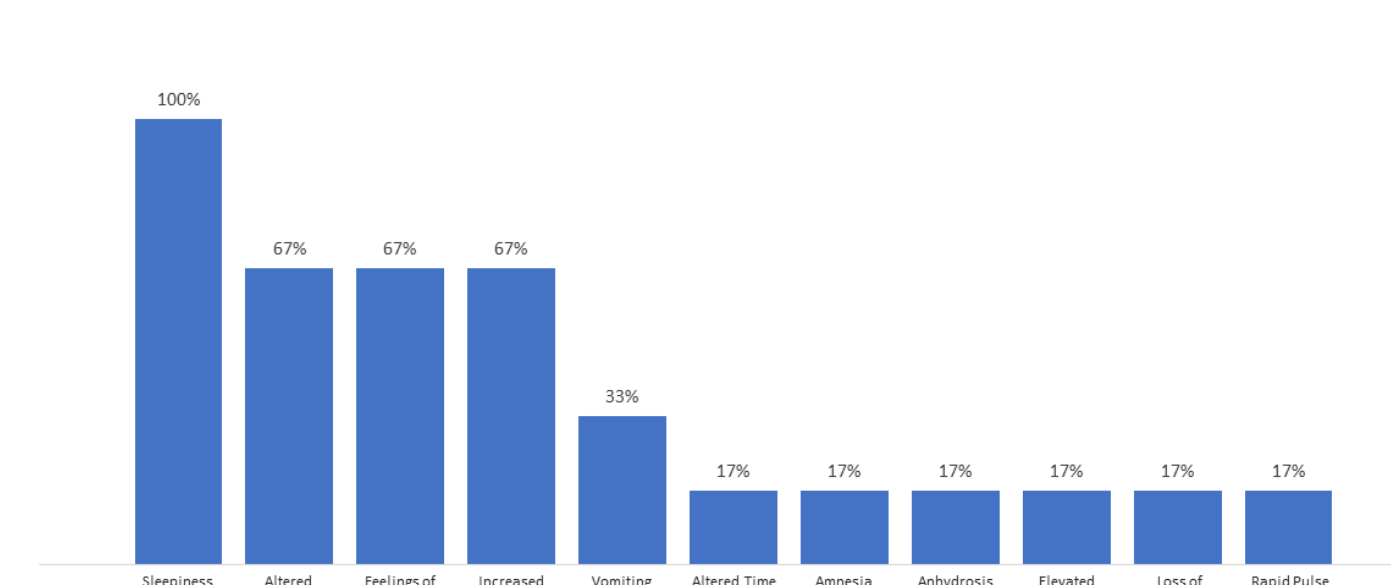


Figure 2. Acute Symptoms of Patients After Unknowingly Ingesting Marijuana

Percentage of Subjects Experiencing Sub-Acute Symptoms (3+ days) (n = 6)

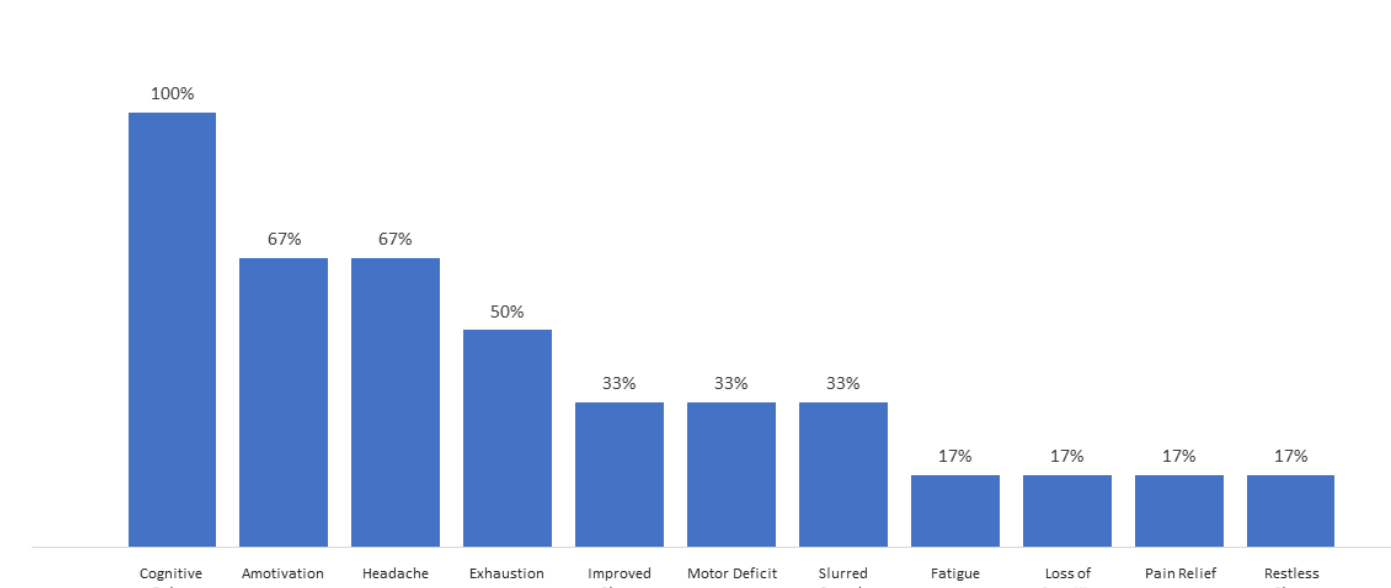


Figure 3. Sub-acute Symptoms of Patients After Unknowingly Ingesting Marijuana

Subjects' Self-Reported Impact of Marijuana on Work Performance (n = 5)

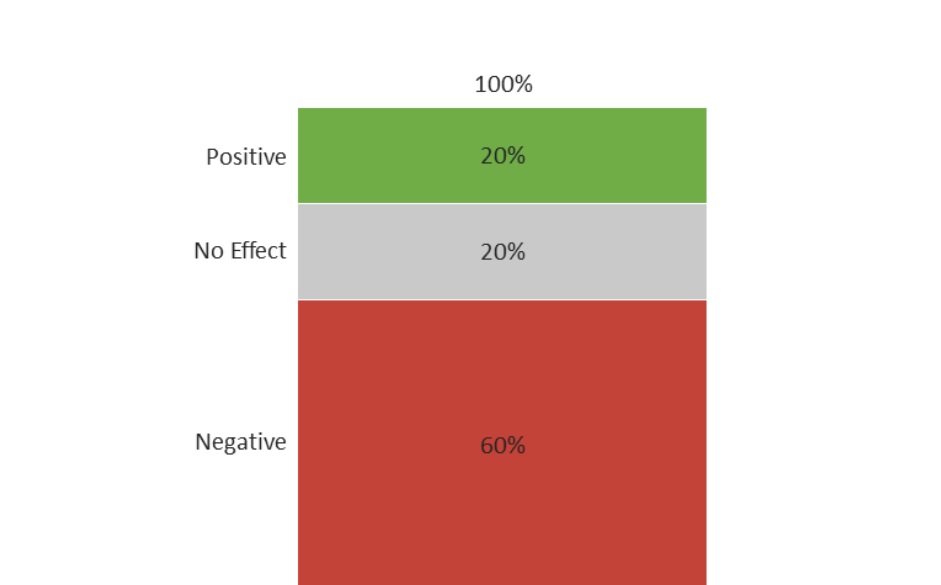


Figure 4. Impact of Marijuana on Work Performance

- All 12 subjects reported sleepiness
- The three most common acute symptoms reported were sleepiness, increased appetite, and feelings of unreality
- Subjects also reported multiple emotions, including anger, confusion, disbelief, and helplessness.
- Three out of the six interviewed subjects reported a negative impact on work

Discussion/Conclusions

- Unintentional marijuana poisonings have increased, but legal and regulatory barriers have limited the study of marijuana outside highly controlled conditions
- This case series illuminates the potential for adverse effects after unwitting marijuana exposure in adults
- While the marijuana exposure in this study did not result in admission for critical care or death, it did result in psychological distress and adversely affected work in some cases
- Proper public education and awareness of marijuana's effects should be readily accessible in order to allow for fair and accurate policy implementation, hopefully minimizing unintentional intoxication cases in the future

Acknowledgements

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References

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