

Intentional Self-Harm Overdoses Before and During the COVID-19 Pandemic in Adolescents Managed by a Medical Toxicology Consultation Service

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concealed in an unplanned manner and tend to be poorly wrapped. This heterogeneity in packaging material, as well as xenobiotic concealed, pose unique challenges regarding potential retrieval and degree of toxicity.

Case report: This is a single patient chart review. A 30-year-old male presented to the Emergency Department after ingesting a plastic bag containing 15 tablets of MDMA (3,4-Methylenedioxyamphetamine). The patient was under arrest by police and ingested the package in an attempt to avoid detection. The patient presented to the Emergency Department with stable vital signs and only reporting mild anxiety. He received plain films of his abdomen, which revealed a potential foreign body. A subsequent CT abdomen and pelvis revealed multiple foreign bodies in the area of his gastric fundus. The patient was admitted to the hospital for continuous monitoring and potential retrieval of the package. The patient had repeat plain films 6h into his stay, which revealed that the foreign body had not progressed. Gastroenterology was consulted and the patient underwent successful endoscopic retrieval of the plastic bag with contents. Repeat plain films showed no retained foreign bodies and patient was discharged in stable condition.

Discussion: The potential interventions for body stuffers are limited and each has potential pitfalls. Whole bowel irrigation can result in rupture of contents and is no guarantee that the product ingested will pass. Similar patients can potentially take up hospital and critical care beds for prolonged periods of time while awaiting the passage of xenobiotic packages. When endoscopic retrieval is an option, it can greatly decrease the length of stay of a patient in a safe, effective manner.

Conclusions: Body stuffers pose unique challenges to medical toxicologists regarding monitoring and potential retrieval of ingested xenobiotics. Endoscopy and retrieval can be useful and potentially decrease length of stay in these patients.

KEYWORDS Body stuffer; MDMA; endoscopy

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160. The importance of emphasizing addiction medicine during medical toxicology fellowship training: a case study of a tertiary care hospital system toxicology consultation service

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Background: As we continue to treat patients during the ongoing opioid overdose epidemic, it is ever more important that providers have adequate experience in understanding and treating patients with addiction, substance use disorder and withdrawal states. Additionally, throughout the COVID-19 pandemic, there have been numerous reports demonstrating that substance use is exponentially increasing. This increases the likelihood that addiction medicine will occupy a more prominent position in our medical field. Until recently, addiction medicine education was not an ACGME program requirement for medical toxicology fellowship programs. We aimed to evaluate the percentage of bedside medical toxicology consultations addressing addiction-related issues, over time, at a tertiary care hospital system.

Methods: We reviewed bedside toxicology consults performed by a tertiary care hospital system's Division of Medical Toxicology consultation service between January 2017 and December 2021 for addiction, substance use, and withdrawal-related cases.

Consultation data is entered by bedside toxicologists and maintained in a secure database. Descriptive statistics were analyzed for various variables and were compared between years, utilizing SPSS28.

Results: Over the 5-year period, the toxicology service was consulted on a total of 4733 patients, of which, 2549 were addiction-related (53.9%). The majority of consults were male (65.6%), with 1 transgender (male-to-female) patient treated during this time. The proportion of addiction medicine consults increased steadily over the five-year time period. In 2017, there were 345 total consults, with 88 addiction-related (25.5%). In 2018, the service was consulted on 509 patients, of which 168 were addiction related (33%). In 2019, this trend continued to increase, with addiction medicine consults accounting for 52.8% of the total consults (478 of 905 consults). 58.7% of the toxicology services' consults were addiction related in 2020 (627 of 1069). As of this past year, of the 1905 total consults, 1188 were for addiction or substance-use complaints (62.4%). The most common primary reason for a medical toxicologist consult, was alcohol withdrawal (803 cases, 31.5%). In 2021, alcohol withdrawal accounted for 44.2% of the total consults, which was a 25.7% increase from pre-pandemic levels. Opioid withdrawal as the primary reason for consultation accounted for 9.1% of total consults across the time-period. In 2017, opioid withdrawal accounted for 2.3% of consults, but increased to 13.0% of the consultations by 2021. Opioid agonist therapy (buprenorphine, methadone) was initiated in 12.7% of total consults. In 2017, there were no cases where opioid agonist therapy was a topic of consultation, but this increased to 12.0% of consults throughout 2021.

Conclusions: At a tertiary care hospital system, addiction medicine consults by bedside medical toxicologists have continued to increase disproportionately compared to other consults. As of this past year, addiction related complaints made up roughly two-thirds of all medical toxicology consults, increasing almost 40% over 5-years. This single center phenomenon could represent a national trend; however, larger-scale studies would need to assess this pattern. This data further supports the recent ACGME medical toxicology program requirement changes, emphasizing the importance of addiction medicine and its relationship to medical toxicology.

KEYWORDS Addiction medicine; public trends; medical education

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161. Intentional self-harm overdoses before and during the COVID-19 pandemic in adolescents managed by a medical toxicology consultation service

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Background: Since March 2020 to the present, the world has been coping with the COVID-19 pandemic and the associated social ramifications. It has impacted community mental health, with several studies demonstrating an increase in anxiety and depression among adults and adolescents during the pandemic. The reasons are multifactorial, however, may be related to a decrease in access to outpatient appointments, social distancing, financial hardships, loss of loved ones, and closures of schools,

jobs, and recreational activities. We aimed to review adolescent intentional self-harm overdose cases presenting to our tertiary care hospital system's medical toxicology consultation service prior to and during the pandemic.

Methods: We reviewed bedside medical toxicology consultations from May 2018–February 2020 (22 months pre-COVID-19) and March 2020–December 2021 (22 months during COVID-19) for self-harm cases in adolescents ages 10–19 years old. Descriptive analysis was performed on these groups for variables including number of self-harm cases, number of intentional overdoses, age, sex, and primary agent used.

Results: The total number of intentional ingestions in adolescents 10–19 years old from May of 2018–December of 2021 was 396: there were 174 cases between May 2018–February 2020 with 95 cases (54.5%) being self-harm cases, and 222 cases between March 2020–December 2021 with 145 (65.3%) cases being self-harm cases. Of the 95 intentional self-harm overdoses in the pre-COVID-19 timeframe, analgesics were the most commonly used medication class ($n=29$; 30.5%). Analgesic medications included acetaminophen, aspirin, and ibuprofen. Acetaminophen was the most commonly used medication for overdose from May of 2018–February 2020 ($n=21$; 23.1%). Antidepressants were the next largest group of medications used ($n=13$; 27.4%). The other overdose xenobiotics pre-COVID-19 were anticonvulsants ($n=5$; 5.3%), anticholinergic/antihistamine ($n=13$; 13.7%), antimicrobials ($n=2$; 2.1%), antipsychotics ($n=8$; 8.4%), cardiovascular medications ($n=4$; 4.2%), lithium ($n=1$), iron ($n=1$), opioids ($n=1$), and sedatives-hypnotics ($n=5$; 5.3%). In the pre-COVID19 time period, cases were 84.2% female ($n=80$), 13.7% male ($n=13$), and 2.1% ($n=2$) transgender (male-to-female, female-to-male, and gender non-conforming). In the 145 self-harm cases during the COVID-19 timeframe, analgesics were most commonly used ($n=47$; 32.4%), and acetaminophen was the most common medication used overall ($n=35$; 24.1%). Antidepressants were involved in 31% ($n=45$). Other agents were ethanol ($n=1$), methanol ($n=1$), anticholinergic/antihistamine ($n=1$), anticonvulsants ($n=8$; 5.5%), antimicrobials ($n=1$), antipsychotics ($n=6$; 4.1%), cardiovascular medications ($n=8$; 5.5%), caustic ($n=1$), dextromethorphan ($n=1$), lithium ($n=2$; 1.4%), opioids ($n=3$; 2.1%), sedative hypnotics ($n=5$; 3.4%), and sympathomimetics ($n=2$; 1.4%). Out of this group, 78.6% ($n=114$) were female, 16.6% ($n=24$) were male, and 4.8% ($n=7$) were transgender.

Conclusions: In the COVID-19 time period, there was an increase in self-harm cases and intentional overdoses. The most common medications used for intentional overdose during both time periods were analgesics and antidepressants, with the most commonly used agent being acetaminophen. The majority of intentional self-harm cases were among females. Future research could focus on larger scale epidemiological data on self-harm overdoses to determine the impact of the pandemic on mental health.

KEYWORDS Intentional overdose; adolescent; COVID

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162. Poison center penetrance, utilization, and call distribution 2016–2020

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Background: Poison center utilization has been associated with decreased emergency department visits, hospitalization rates,

and total healthcare expenditure. Assessment of poison center utilization is necessary to increase public awareness and promote effective outreach. This study aims to describe utilization trends and county changes in call volume over time. Penetrance as a measure of poison center utilization is the annual rate of human exposure calls per population and varies by many social, economic, and geographic factors. Geospatial mapping and analysis of penetrance may reveal poison center underutilization and identify areas for targeted outreach.

Methods: A single-center, retrospective study of closed, human exposure calls to a poison center was conducted between January 1, 2016, and December 31, 2020. Patient demographics included age, gender, medical outcomes, and exposure reason. Penetrance was assessed by cross-linking poison center data with county-level population statistics from the US Census Data. Linked data were stratified by adult, elderly, and pediatric subsets. Percent change of county-level call volume and county-level penetrance was assessed over 1-year and 5-year periods and geospatially visualized using Quantum Geographic Information System (QGIS).

Results: Of the 92 state counties, 14 counties had a decrease in penetrance of greater than 20% between 2019 and 2020 compared to 6 counties in 2018 and 2019. A total of 8 counties had an increase in penetrance of greater than 15% from 2018 to 2019 compared to 27 counties in 2019 and 2020. Overall, data demonstrated a decreased number of calls between 2016 and 2020. Decreases were consistent across all age groups over time ($p < 0.001$). Contrarily, increased admissions to psychiatric care and noncritical care units were found. Medical outcome analysis revealed an increase in major effects and a decrease in the number of minor effects over time.

Conclusions: Poison center penetrance is variable by geographic location. Future studies should include an assessment of county socioeconomic and demographic variables. Understanding the distribution of poison center calls is essential for improving resource allocation and increasing poison center access across the state.

KEYWORDS Utilization; penetrance; center

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163. Minimal recovery of drug from extracorporeal treatment in a case of phenytoin toxicity associated with coma and hypothermia

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Background: The Extracorporeal Treatments in Poisoning (EXTRIP) workgroup provides a weak conditional recommendation in support of hemodialysis (HD) for select patients with severe phenytoin poisoning. Despite this recommendation, the HD clearance of phenytoin is poorly studied. We present a patient who developed phenytoin toxicity that was treated with hemodialysis and report on the efficacy of phenytoin removal during HD.

Case report: An 87-year-old man with epilepsy who was maintained on a stable dose of 300 mg phenytoin extended-release daily was admitted to the hospital for treatment of Coronavirus Disease 2019 and congestive heart failure. On hospital day 14, the patient had a gradual onset of depressed mental status with