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75. Toxic plants used in suicide attempts are frequently purchased online: a review of medical toxicology consultations, 2017–2024

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Background: Suicide attempts are increasing in the United States and are the second leading cause of death among teenagers. Ingestions account for nearly three-quarters of suicide attempts, and yet research is predominately focused on prescription medication, over-the-counter medication, and illicit substance ingestion, with scant research focused on toxic plant ingestion. Preventing suicide attempts from toxic plants may require different interventions to reduce incidence than other types of ingestions. The objective of this study was to characterize cases of toxic plant ingestion in suicide attempts in a nationally based patient cohort.

Methods: We identified ingestions of toxic plants with suicidal intent included in the Natural Toxins Sub-registry, part of the Toxicology Investigators Consortium (ToxIC) Core Registry, from March 2017 to December 2024. The ToxIC Core Registry is a comprehensive database of patients seen by medical toxicologists across 35 medical centers in the U.S. and 4 international sites. We report summary information related to patient demographics, previous psychiatric history, plants used, how the plant was obtained, interventions given, and disposition.

Results: Among 42 toxic plant exposures, ten (23.8%) patients ingested the plant with suicidal intent. Of those, seven (70%) were adults, two (20%) were children aged 13–18 years old, and one (10%) was a child aged 7–12 years old. Half of the patients were male (n = 5, 50%), and most were white (n = 8, 80%). Four patients (40%) had a prior drug overdose, and five (50%) had a previous psychiatric history. No patients had a documented substance use disorder. Four patients were admitted to the intensive care unit (ICU), including two to the pediatric ICU. Six of seven adult patients purchased the plant they ingested online; one grew foxglove at home. Of the pediatric ingestions, one patient purchased the plant online, one reported they picked the plant in a meadow (oleander), and one reported they picked the plant near their home (juniper). Nine of ten patients (90%) survived to hospital discharge.

Conclusion: Adult patients with suicide attempts using a toxic plant almost always purchased the plant they ingested online, whereas pediatric patients both purchased plants online and foraged for them. Additional research is needed to identify ways to protect patients who are suicidal from accessing poisonous plants via the internet. Physicians treating poisoned patients should be prepared to treat toxic plant ingestions from non-native plant species.