

A SEVEN YEAR EPIDEMIOLOGICAL SURVEY ON HERBAL AND MUSHROOM POISONING IN A REFERRAL CENTER

Hassanian-Moghaddam H.¹ MD, FACMT; M Rahimi^{1,2} MD; S Sattar zad Fathi¹ MD

¹ Department of Clinical Toxicology, Loghman-Hakim Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran

² Excellence Center of Clinical Toxicology, Iranian Ministry of Health, Tehran, Iran

Objective: We aimed to study on the prevalence, clinical manifestations, demographic data and outcome of hospitalized "mushroom and herbal toxicities" in a referral poisoning center.

Methods: In a retrospective case series, using ICD10 codes we looked for any accidental, intentional, assault or undetermined exposure to pure mushroom or herbal toxicities through hospital records within seven years (April 2007 to December 2013). All mushroom or herbal toxicity cases which are known as stimulant, hallucinogen or opioid were excluded. A self-made questionnaire was designed to collect all data. For the description of quantitative variables with normal and non-normal distribution, mean (\pm SD) and median (inter quartile range) were used, respectively. For qualitative variables, percent of frequency was used.

Results: During the study period 103 cases with a male/female ratio of 1.8. Two age groups were mostly involved including 4-8 and 18-30 year (range 1, 84).

The responsible plant/mushroom of toxicity and their clinical presentations were shown in Table 1. All the patients exposed through ingestion. Accidental and recreational toxicity were the most causes of hospitalization. Herbal shops (27.2%), surrounding nature (26.2%), friends/relatives (17.5%), and drug stores (5.8%) were the most known sources of provision. Median [IQR] ingestion to ED arrival time was 8 [4, 16] (range 15 minutes to 48 hours). In total 87% of the patient's required supportive treatment, four patient (4%) were admitted in ICU, and 3 datura toxicity cases (3%) were intubated. The mean time length of stay was 40 ± 31 hours (range 20, 240). While all patients survived, for 43.2% of the cases follow up visits were recommended.

Conclusion: Poisoning with plants and mushrooms are uncommon causes of poisoning in urban area. They're mainly seen in young population due to accidental or recreational exposures. They may need advanced treatments and critical care but usually don't cause severe morbidity or mortality. Supportive care and conservative treatment were efficient in most cases.

Table 1. Toxic plants and clinical manifestations

Cause of toxicity	Number (%)	Clinical presentation (%)
Datura	35 (34)	LOC;29 (82), Hallucination;23 (66), Agitation;23 (66), Dizziness;8 (23), Flushing;7 (20), Red Eye; 6 (17), Weakness; 4 (11), Vertigo;4 (11), Dyspnea;2 (6), Nausea;2 (6), Ataxia;2 (6), Vomiting;1 (3), Headache;1 (3), Hiccups;1 (3), Epistaxis;1 (3), Seizure;1 (3)
Castor Bean	19 (18.5)	Nausea; 17 (90), Vomiting;15 (79), Diarrhea;11 (58),



		Abdominal Pain;5 (26), Vertigo;2 (10), Headache;1 (5), Dizziness;1 (5), Weakness;1 (5)
Eucalyptus	13 (12.6)	Dyspnea;4 (31), Nausea;3 (23), Vomiting;3 (23), Sore Throat;3 (23), Abdominal Pain;2 (15), Hiccup;2 (15), Dizziness;1 (8), Flushing;1 (8), LOC;1 (8)
Herbal Tea	8 (7.8)	Nausea;4 (50), Vomiting;3 (37), LOC; 2 (25), Ataxia;2 (25), Hallucination;2 (25), Dizziness;1 (12), Weakness;1 (12), Vertigo;1 (12), Flushing;1 (12), Sore Throat;1 (12), Agitation;1 (12)
Acacia	6 (5.8)	Nausea;6 (100), Abdominal Pain;2 (33), Vomiting;6 (100)
Mushrooms	6 (5.8)	Flushing;3 (50), Abdominal Pain;2 (33), Weakness;2 (33), Dizziness;1 (16)
Caesalpinia	5(4.9)	Nausea;5 (100), Vomiting;5 (100), Abdominal Pain;2 (40), Dizziness;2 (40), Vertigo;1 (20), Agitation;1 (20), LOC;1 (20)
Wild Garlic	3 (2.9)	Nausea;3 (100), Vomiting;3 (100), Vertigo;3 (100), Diarrhea;1 (33)
Nigella Sativa	2(1.9)	LOC;2 (100), Dyspnea;1 (50), Flushing;1 (50), Seizure;1 (50)
Citrullus Colocynthis	2(1.9)	Nausea;2 (100), Abdominal Pain;2 (100), Vomiting;2 (100)
Wild Fruits	2(1.9)	Nausea;2 (100), Vomiting;2 (100), Diarrhea;1 (50), Dizziness;1 (50), Weakness;1 (50), Vertigo;1 (50), LOC;1 (50)
Nutmeg	1 (1)	Hallucination;1 (100), LOC;1 (100)
Senna	1 (1)	Hallucination;1 (100), LOC;1 (100)
Total	103 (100)	