In Response to: Poisonings with Suicidal Intent Aged 0-21 Years Reported to Poison Centers 2003-12

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Sheikh S, Hendry P, Lynch S, et al. Poisonings with Suicidal Intent Aged 0-21 Years Reported to Poison Centers 2003-12. *West J Emerg Med*. 2015;16(4):497-502.

To the Editor:

It was with great interest that we read the paper by Sheikh et al. that attempted to use Poison Control Center (PCC) data to explore the clinical features of self-poisonings with suicidal intent in children. Understanding the features of youth-attempted suicide by poisoning is necessary to effectively identify and treat those patients at highest risk for serious outcomes.

The study was able to characterize several clinical features of the 52.2% of subjects in the 15-18 year old age group. We question why the authors performed a subgroup analysis on children <10 years of age, since this group represented <1% of the study patients. It seems that an in-depth analysis of the 15-18 year old age group would have yielded a more useful conclusion. As clinicians, we view the most clinically significant population as those who attempted and ultimately completed suicide. The data provided to readers in this regard were incomplete. Details regarding the exact age, substance ingested and details surrounding the cause of death would be useful in determining risk factors of the population and how the substance may have contributed to mortality. Given the relatively small number of deaths, this information could have easily been provided for a more complete assessment.

Finally, the authors conclude that undiagnosed attention deficit hyperactivity disorder (ADHD) predisposes pediatric patients to self-harming behaviors. This conclusion is completed unsupported by any data. No information about medical history is mentioned and readers cannot assume that patients that overdosed on ADHD medications did so because they had the diagnosis themselves. Medications may be from siblings, friends or any other number of possibilities. Furthermore ADHD medications have a variety of clinical applications outside of treatment for ADHD.

This study was further hindered by the inherent limitations of analyzing PCC data. We suggest that it could have been strengthened by focusing on the group that is at highest risk, providing past medical history and prescribed medications, and focusing on mortality as a more significant outcome. Providing readers with this information would have strengthened the conclusions and enabled further interpretation of the data.

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In Reply:

We chose to perform a sub-analysis on patients younger than age 10 as we were surprised to see such a relatively large number of intentional self-harming behaviors performed by patients in this age group. Given the paucity of published data for this age group we thought it important to characterize and discuss this particularly vulnerable population.

Details for the cases resulting in death, such as the exact ages, names of the 52 substances ingested, clinical effects, and therapies used, were analyzed but not included due to space limitations as this manuscript was submitted as a brief report. For those interested, the results are provided below (Tables 1-4).

Table 1. Deaths by reported age.

Age (years)	Number of patients
14	1
16	1
17	2
18	3
19	5
20	2
21	3

Table 2. Substances reported in death cases.

Substance	Cases
Unknown	15
Aspirin	4
Tylenol 500mg	3
Benadryl or diphenhydramine	2
Motrin 800mg	2
Seroquel	2
Adderall 20mg tablet	1
Amitriptyline 10mg	1

Table 2. Continued. Substances reported in death cases.

Substance	Cases
Anafranil 25mg	1
Benicar 5mg	1
Cartia xt 240mg	1
Depakote 250mg	1
Effexor 75mg	1
Euthanasia solution, T-61	1
Flecainide	1
Flexeril 10mg	1
Geodon	1
Ibuprofen	1
Lamictal 150mg	1
Lexapro 10mg	1
Methadone	1
Methamphetamine	1
Opiates	1
Paxil 40mg	1
Potassium	1
Pseudoephedrine	1
Trazadone	1
Strattera 18mg	1
Wellbutrin XL 150mg	1
Vicodin	1
Xanax	1

Table 3. Therapies used in death cases.

Therapies	Cases
Oxygen	15
Ventilator	13
Intubation	13
IVF	12
Alkalinization	10
Vasopressors	6
CPR	5
Atropine	4
Benzodiazepines	4
Charcoal, single-dose	4
Naloxone	3
NAC	3
Glucagon	2
Antiarrhythmics	2
Hemodialysis	2
Whole-bowel irrigation	2

IVF, intravenous fluids; *CPR,* cardiopulmonary resuscitation; *NAC,* N-acetyl cysteine

Table 3. Continued. Therapies used in death cases.

Therapies	Cases
Insulin	1
Flumazenil	1
Calcium	1

Table 4. Clinical effects reported in death cases.

Clinical effects	Cases
Cardiac arrest	12
Asystole	11
Respiratory arrest	10
Coma	9
Tachycardia	8
Hypotension	7
Vomiting	5
Hyperventilation/tachypnea	4
Conduction disturbance	3
Drowsiness/lethargy	3
Nausea	3
Hyperglycemia	3
Acidosis	3
Respiratory depression	3
ECG change (other)	2
Hypertension	2
Seizure (single)	2
Mydriasis	2
Tinnitus	2
Diaphoresis	2
Bradycardia	2
Confusion	1
X-ray findings (+)	1
Abdominal pain	1
CPK elevated	1
Dysrhythmia (other)	1
AST, ALT >1000	1
Seizures (multiple, discreet)	1
Syncope	1
Chest pain (noncardiac)	1
Increased creatinine	1
Dizziness/vertigo	1
Diarrhea	1
Increased anion gap	1
Cyanosis	1

ECG, electrocardiogram; *CPK,*creatine phosphokinase; *AST,* aspartate aminotransferase; *ALT,* alanine aminotransferase

Several studies, performed in the U.S. and internationally, have shown a relationship between ADHD and self-harm in the pediatric population.[1,2] Impey M. performed a review of the literature and concluded based on the findings of 25 studies that patients with ADHD were more likely to have suicidal ideas and commit suicide attempts. This was true across all age groups (including the pediatric population).[3] Our findings in conjunction with the literature brought us to suggest screening for ADHD in addition to mental health disorders in those patients presenting with self-harming behavior.

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