100. Sex Differences in Pediatric Poisonings: an Analysis of the Toxicology Investigators Consortium (ToxIC) Registry: 2010−2016.

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Background: Previously reported sex differences in pediatric poisonings include a male predominance in accidental ingestions and a female pre- dominance in intentional poisonings.

Hypothesis: The study aim was to review sex differences among ToxIC pediatric poisonings.

Methods: Pediatric cases between 1/2010−12/2016 were reviewed. Cases with missing data were excluded from the analysis. Descriptive statistics, chi-square tests and logistic regression were used to assess differences in distribution of study variables by sex. All analyses were performed with Stata SEv14.2. Study was exempted from IRB review. Results: Among a total of 51,441 cases, 542 (1.05%) were excluded for missing data; 13,836 were pediatric cases: 13.1% (n = 1818) were < 2 years, 18.0% (n = 2496) were 2−6 years, 8.8% (n = 1212) were 7−12 years, and 60.1% (n = 8310) were 13−18 years of age. 58.2%, n = 8057 were females. 49.5% were intentional pharmaceutical exposures: females were more likely (OR = 3.3; 95% CI 3.1−3.6) than males to be managed for this exposure. Males were more commonly (OR = 2.0; 95% CI 1.8−2.2) managed for intentional non-pharmaceuticals. Analgesics/ opioids cases were most common: 22.7% of cases; females were more likely (OR = 2.5; 95% CI 2.3−2.7) than males to be treated for this expo- sure. Males were 1.7 times more likely than females (OR = 1.7; 95% CI 1.4−2.0) to be treated for sympathomimetics. 86.1% of cases were oral ingestions. Females were more likely to present with oral ingestion (89.8% versus 80.3%, $p < 0.001$); males were more likely to present with inhalation (5.5 versus 1.6%. $p < 0.001$). Only 18.1% of cases had abnormal vitals: tachycardia was most common (9.2%), with no difference in presenting signs by sex. No medical intervention was recorded in 77.9% of cases. Pharmaceutical support was given in 16.0%, intubation/mechanical venti- lation in 6.0%, and ECMO in 0.1%. No significant differences in treatment intervention were observed by sex. Twenty-four females (0.17% of pedi- atric cases) and 21 males (0.15% of pediatric cases) died.

Discussion: Sex differences in pediatric poisonings included a predomi- nance of intentional pharmaceutical exposures and oral ingestions among females and intentional non-pharmaceutical exposures and inhalant ex- posures in males.

Conclusions: Sex-based differences observed in pediatric poisonings have implications for education and prevention efforts.