EP – 21

Paediatric and adolescent poisoning in the Hunter region of Australia

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Objective: The aim of this study is to describe the demographic and clinical characteristics of paediatric and adolescent acute poisonings reported to a regional toxicology service.

Methods: The Hunter Area Toxicology Service (HATS) handover database was searched between 01/01/2015 and 31/12/2016 for all calls regarding cases aged under 18 years who had an acute presentation to the Emergency department. Calls received from facilities outwith HATS referral area were excluded. Two subgroups were defined, aged 12 and under (paediatric) and 13 to 17 years (adolescent). Demographic data including age and sex was recorded as well as presentation details including the category of presenting facility, the reason for the exposure and the presentation pattern over the study period. Data was also recorded analysing disposition including length of stay in hospital as well as the number of ingestant exposures and ingestant categories. The study was approved by the area ethics committee. Descriptive statistics were used to analyse the data with medians describing continuous variables and proportions expressed as percentages used for categorical variables. Statistics were calculated using Microsoft ® excel.

Results: A total of 769 consultations occurred within the study period of whom 683 met the inclusion criteria. There were 240 paediatric presentations with median age of 2 and 118 (49.2%) were female. Of these, 11 (4.6%) were due to deliberate self poisoning and 166 (69.2%) were deemed accidental exposures. Hospital admission was required for 62 (25.8%) of whom 5 (2.1%) went to ICU and 1 (0.4%) was admitted to a mental health unit. This group accounted for 279 exposures with 205 (85.4%) presentations involving a single agent exposure. Pharmaceutical agents represented 177 (63.4%) of exposures. The adolescent group had 443 presentations. Median age was 16 and 339 (76.5%) were female. Deliberate self poisoning accounted for 391 (88.3%) and 7 (1.6%) were due to accidental exposure. Hospital admission was required in 224 (50.4%) of cases with 18 (4.1%) going to ICU and 68 (15.3%) admitted to a mental health unit. This group contained 688 exposures with 291 (65.7%) presentations involving a single agent exposure. Pharmaceutical agents represented 603 (87.6%) of exposures.

Conclusion: Most paediatric exposures are accidental and occur in the toddler age group. Adolescent exposures are more likely to be deliberate self poisoning with pharmaceutical agents, have a higher proportion of females and more likely to require hospital admission.