Poisonings

Post Wed 3.5

966 TOUGH PILL TO SWALLOW: A RETROSPECTIVE REVIEW OF POISON-RELATED HOSPITAL VISITS IN ALBERTA

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Background Little is known about the events and circumstances that contribute to poison-related incidents and mortality in Alberta. Poisoning events may take on any of three forms of exposure: Unintentional (including iatrogenesis – complications resulting from medical care), Experimental (including suspected suicidality), and Intentional. The objective of the current study was to review and analyse patient records from 18 hospital sites to ascertain trends in morbidity, mortality, and healthcare utilisation for medical incidents related to poisonings in Alberta.

Methods A retrospective analysis of health services records involving poisoning events was conducted for the 2010 calendar year. The Emergency Department (ED) and In-Patient (IP) data were analysed as separate event-sets to compare and contrast circumstances and conditions, and subsequent courses of action taken. Protocol filters yielded a total of 1,729 records used in the final analysis; 1,360 ED records and 369 IP records. The data were summarised using descriptive statistics and presented as frequency tables and graphs, and where appropriate as means. Where inferential statistics are used, the level for significance was set at $p < 0.05$.

Results The majority of records indicated intentional poisonings (i.e. voluntary self-harm). Females were implicated in 56.1% of all ED poison visits, while their male counterparts were fewer at 43.9%. The majority of cases involved adults aged 22–60 years. Young adults aged 17–21 years and toddlers aged 1–5 years were the next most represented groups. Overall, the highest number of poisonings was attributed to prescription medications. Females consumed predominantly prescription medications while males consumed primarily recreational substances.

Conclusions Intentional poisoning were found overall to be higher than unintentional poisonings. Exposures varied between age groups and other demographic factors. Rural populations exhibit a unique set of circumstances and outcomes given relative isolation from major centres. Poisonings are complex events that span financial, socio-cultural, and healthcare domains. These events are a considerable societal and financial burden in Alberta – both intentional and unintentional. Many poisonings that appear benign on the surface may have implications beyond the acute presentation of symptoms.

967 A RESEARCH ON CHILDREN'S MEDICATION SAFETY IN HOSPITAL, KINDERGARTEN AND FAMILY IN CHINA

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Background Posioning is the leading causes of childhood injury told by China National Injury Surveillance System (NISS). There is no research on children's medicine safety issue in China. This research includes a retrospetive study on hospital data, a questionnaire survey among paediatricians, parents and behaviour tests among children.

Methods 603 medical cases that related to medication poisoning among were collected through from Beijing Capital Children's Hospital and Shanghai Children's Medical Centre during the year 2012 to 2014. Opinions of 146 paediatricians from 114 hospitals in 35 cities were collected through a questionnaire during a national seminar. Awareness of 1760 kindergarten children's parents' in 4 cities were collected through questionnaires. Ideas of 218 children were collected through one-on-one dialogue by the trained teachers and every child was asked to open medicine bottles with or without child-proof, the time was recorded.

Results Medication accounted over half of all poisoning cases in children's hospitals; 1–4 age group was the leading victims. Main cause is mistaking by children (79.2%); There is an out-standing increase on cardiovascular medicines mistaken by children such as anti-hypertension. Half parents have placed home medicine in an easier way for adult's reach. 98% of kindergarten children could opened non child-proofing bottles in 2.5 seconds while 16.7% of them opened child-proofing bottles in 9.6 seconds; 41% paediatricians thought it a must to talk with parents on medication safety while almost all paediatricians admitted that they barely have time to do so.

Conclusions There is a strenuous need on Child medication safety in China. Safe storage is the key action for the intervention. Paediatricians have a great opportunity to be involved in medication safety promotion. There is another opportunity to engage grandparents as they are one of the main caregivers.

968 ENVIRONMENTAL INVESTIGATION FOR MASS LEAD POISONING AMONG CHILDREN IN DUSTRIAL AREA, THAILAND

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Background In 2012, a girl with blood lead level of 166 mcg/dl was admitted in Ramathibodi hospital due to status epilepticus. She lived with her parent in the recycling factory where high lead dust was found around the area inside. Children in the school which located around 100 metres from such recycling factory were investigated and found that the prevalence of high blood lead level (BLL) $\geq$ 10 mcg/dl was 44.2% (75 in 165 children).

Methods We conducted a case-control study with 43 cases of school children with BLL $\geq$ 10 mcg/dl, and a control group of 43 children from the same school by matching criteria of gender and classroom. The interviewed personal data, information on environmental risk factors and collected household environmental samples were collected by questionnaire and laboratory technique to identify the association between environmental factors, BLL $\geq$ 10 mcg/dl, and to study the prevalence of low IQ and learning disability among children with BLL $\geq$ 15 mcg/dl. Determined factors influencing BLL were analyses by univariate analysis and multiple logistic regression analyses. Children with

BLL ≥ 15 mcg/dl were tested and compared for significant of IQ and learning disability differences.
Results Eighty six of children were enrolled. The multiple logistic regression showed the association between high BLL and school duration more than 4 academic years (p-value = 0.02), father's occupation related with lead (p-value = 0.044) and the distance between home and the factory <500 metres (p-value = 0.029). Children with BLL ≥ 15 mcg/dl, we found that prevalence of low IQ was 25% and of learning disability was 66.7%.
Conclusions High blood lead level among children associated with living at home, attending in the school nearby the lead pollution factory, and father's occupation related with lead. The prevalence of low IQ and learning disability among children with BLL ≥15 mcg/dl was higher than average of Thai children. Screening blood lead level among children in industrial area is necessary.

969 TAKE ACTION TODAY – PUT THEM AWAY

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Background Every year thousands of infants need medical care for poisoning from products commonly found around the home. Whilst long term injury is rare, the distress caused and the impact on hospital services could be avoided by increased awareness. Because of their inquisitive nature, most accidental poisonings happen to children under-five, predominantly aged one to three.
Description RoSPA set up a major pilot programme in 2013 to prevent child accidents in the home from cleaning products. Launched in six cities and delivered through at least 120 local partners, the programme provided risk assessment tools and materials, which equiped both professional and consumers with skills and knowledge to ensure they were able to recognise potential dangers. The scheme provided families with a free handy magnet pad featuring safety advice.
Results professionals benefitted from receiving education, while 240,000 families received advice and resources. Media coverage reached over 4 million people via television, radio and newspapers. Social Media was also at the heart of this campaign. Evaluation included a survey of both practitioners and families with positive feedback in the awareness of dangers and behaviour change. Early indications show that in the cities targeted, there has been a drop in the number of children attending emergency departments due to poisoning.
Conclusions The programme educated professionals and families on poisoning dangers in the home and has seen an initial reduction in hospital admissions in target areas. People were more receptive to educational resources that fit into their lifestyle and home. A majority of families also said they had taken action or shared safety messages after their encounter with the programme.

970 FREQUENCY OF PATIENTS PRESENTING IN EMERGENCY ROOM WITH METHANOL POISONING AND THEIR AND OUTCOMES

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Background Methanol toxicity may cause severe morbidity and mortality if not treated timely. These alcoholic drinks are generally very cheap and are therefore attractive to people with low incomes.We have seen cases of methanol poisoning outbreaks in our population several times but no work has been done so far to estimate the methanol exposure and its outcome complications.
Methods This was a retrospective observational study. All cases of Methanol poisoning from January 1988 to December 2014 were reviewed.
Results Total number of methanol poisoning cases reported in the duration of (Jan.1988–Dec.2013) were 35 (1.4%). All were male with mean age of 36.2 ± 8.6 years. Present in ER with the mean GCS of 10.4 ± 4.4. Blurring of vision present in 48% and 28% with complete blindness. Mean arterial pH on arrival is 6.8 ±0.5. Eighty eight percent received ethanol and 32% received bicarbonate for immediate treatment. Dialysis requried in 20%. Total mean length of stay in hospital was 76122 hours.Thirty six percent were expired while 64% discharge with complication (Blindness and acute kidney injury). In a multivariate Cox regression analysis, it was computed that the GCS score (odds ratio [OR] 0.71, 95% confidence interval [CI]: 0.582−0.876) (P = 0.032), and serum creatinine level (OR 3.79, 95% CI: 1.32−17.440) (P = 0.026) were significant risk factors associated with mortality and complications.
Conclusions From the study we concluded that due to lack of awareness the burden of this poisoning is increasing causing increase in mortality and morbidity. Low GCS and sercum creatinie are associated with worst outcome. Although this data does not reflect the actual incidence of methanol poisoning in our country as majority of them goes to government hospital and most of them die before seeking any medical treatment.

Sports and Exercise Safety

Post Wed 3.6

971 SPORTS INJURIES AMONG HIGH SCHOOL ATHLETES IN WEST CENTRAL FLORIDA FOR ACADEMIC YEAR 2014–2015

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Background Sports injuries in children and adolescents continues to be a growing public health concern. The purpose of this research is to report the 2014–2015 results of the University of South Florida (USF) Sports Medicine and Athletic Related Trauma (USF-SMART) Institute high school athletes' sports injury data.
Methods The SMART program hires certified athletic trainers (ATCS) to collect data on high school athletes' sports injuries in schools in west-central Florida. Utilising the Reporting Information Online (RIO) Surveillance System, data were collected by ATCS from 18 large public and private high schools and SAS Version 9.4 was used for the data analysis. Data analysis included descriptive statistics, calculations of injury rates per 1000 athletic exposures, and determination of relative risks.
Results The leading rate of injury per 1000 athlete-exposures for practices was for football at 2.91, followed by men's cheerleading at 2.23, and women's wrestling at 2.16. For competitions, the injury rate per 1000 athlete-exposures was greatest for football at