

**Objectives:** The purpose of the study is to assess the epidemiological variables of fatal poisoning in a rural part of Southern India to understand the magnitude and pattern of poisonings in this region and identify the people at risk.

**Materials and Methods:** The present hospital-based retrospective analysis was carried out in a tertiary care hospital in a rural part of Southern India. All the poisoning cases autopsied during January 2007 and December 2010 was included in the study. A detailed profile was made based on the hospital and autopsy records, information furnished by the police and reports from the regional forensic science laboratories. The data was statistically analysed using SPSS version 11.0. Chi-square ( $\chi^2$ ) test was performed to test the significance of each group.

**Results:** A total of 162 cases of fatal poisonings were recorded during the study period. Males were predominantly affected (66.0 %), male–female ratio being 1.9: 1. Majority of the victims were Hindus (89.5 %) and aged between 20–29 years (35.2 %). Mean age was  $37.07 \pm 18.3$  years. Agrochemical agents were the main culprit with organophosphates (OPCs) alone were implicated in more than half of the cases, followed by carbamates and rodenticides. The manner of death was suicidal in 86.4 % and accidental in 10.5 % cases. Most of the victims consumed poison in the morning hours between 6 am and 12 noon ( $n=62$ ) and maximum fatalities were reported in the months of May ( $n=19$ ). Period of survival ranged from 0 to 26 days. Fatalities (47.5 %) were reported within 3 days of consumption of poison.

**Conclusion:** Acute poisonings are a cause of concern in the region. Strict implementation and enforcement of laws, greater control in the sale, and use of agrochemicals are recommended along with better health care facilities in rural India, to prevent poisoning-related mortalities.

### (103) Malaysian Hospital Calls for Children Exposure to Household Cleaning Products: an Analysis of 2006–2009 National Poison Centre Data

Halilol Rahman M.K.<sup>1</sup>, Rahmat Awang<sup>1</sup>, Sa'ed H. Zyoud<sup>1,2</sup>, Adilah MA<sup>1</sup>, Nur Afni A.<sup>1</sup>

<sup>1</sup>WHO Collaborating Centre for Drug Information, National Poison Centre, Universiti Sains Malaysia (USM), Penang, Malaysia.

<sup>2</sup>Poison Control and Drug Information Center (PCDIC) and College of Pharmacy, An-Najah National University, Nablus, Palestine

**Objective:** Household cleaning products (HCP) have been responsible for many accidental poisonings among children. In Malaysia, there is no available published epidemiological data for poisoning among children regarding these products. Thus, the aim of this study is to analyse all referral cases and

report all the telephone calls to the National Poison Center (NPC) by hospitals in Malaysia regarding HCP exposure.

**Methods:** We analysed all calls related to HCP reported to NPC for the period between January 2006 and December 2009. Type of HCP, age, gender, date, route and reason of exposure were evaluated using SPSS version 15.0.

**Results:** There were 1,106 telephone HCP-related enquiries which constitute approximately 49.5 % of all household poisoning cases collected in the same period. HCP exposures accounted for 14.8 and 34.6 % of all poisoning cases in children and adult, respectively. Majority of the cases in children were reported to be accidental (92.2 %). Bleach (i.e. sodium hypochlorite) was the most commonly involved product ( $n=168$ ) followed by detergent ( $n=70$ ) and antiseptic products (i.e. chloroxylenol;  $n=27$ ). Exposure to HCP occurred mainly via ingestion (98.8 %) followed by inhalation (0.6 %). The number of poisoning calls related to HCP was observed to be increased annually from 38 calls (11.4 %) in 2006 to 134 calls (40.4 %) in 2009 ( $P<0.001$ ). Information on children outcome was not available.

**Conclusion and Recommendations:** There has been a significant increase in the number of calls received by the NPC involving children who have accidentally taken cleaning products. Parents and childcare providers must ensure that HCP should be kept in a locked cabinet and out of children's sight and reach. Improved methods of follow-up are needed if adequate information is to be made available to support management and provide advice to the healthcare professionals. Finally, another national study needs to be carried out to better estimate the pattern of the HCP use and pattern of inappropriate products storage.

### (104) The Effects of Health Educational Intervention on Blood Lead Levels in Workers in a Lead-Contaminated Factory

Mohammadian Bajgiran AH, Afshari R.

Medial Toxicology Centre, Mashhad University of Medical Sciences, Mashhad, Iran

**Introduction:** The most common exposure to lead among adults is occupational in the whole world, and it also is a health problem in Iran. We conducted this study to determine the prevalence of clinical findings and the effects of health educational intervention on blood lead levels in lead-contaminated factory in northeastern Iran.

**Methods:** We visited workers in a lead-contaminated factory and collected data by direct history taking and physical examination. After the first visit, we installed ventilation in the factory, taught them some health educational information, and for high blood lead levels, we did conventional medical intervention. Blood and urine lead concentrations were measured before and after of interventions.