

Presence of highly frequent oral soft tissue lesions in Iranian veterans with sulfur mustard poisoning compared to general population and according to dental need treatment necessitates periodical oral soft tissue and routine oral dental examinations by oral medicine specialists and treatment more carefully.

(36) Hemolytic Anemia Presenting as Hemoglobinuria from Paradichlorobenzene Ingestion

Mary Ondinee U. Manalo¹, Cherry Grace G. Quingking², Clarissa Paz Dioquino^{2,3}.

¹Department of Medicine, University of the Philippines–Philippine General Hospital, Manila, Philippines.

²National Poison Control Center, University of the Philippines–Philippine General Hospital, Manila, Philippines.

³Section of Neurology, Department of Neurosciences, University of the Philippines–Philippine General Hospital, Manila, Philippines

Synopsis: A 24-year-old man was diagnosed with hemolytic anemia when he presented with hemoglobinuria, low hemoglobin, and increased bilirubins, after ingesting mothballs containing paradichlorobenzene. He was transfused with 5 units of PRBC and was discharged improved.

Clinical Presentation: A 24-year-old man intentionally ingested three crushed mothballs. Five days after ingestion, the patient manifested with anemia and bright red urine.

Physical Findings: The patient was received stable at the Emergency Room of the Philippine General Hospital with coffee-ground vomitus, pink palpebrals, icteric sclerae, epigastric tenderness, and normal-sized liver.

Laboratory Work-up: The content of the mothball was established to be paradichlorobenzene using the floatation test. The patient tested positive for methemoglobinemia using the filter paper test. Initial hemoglobin was 120 g/L that markedly decreased to 53 g/L on the third hospital day with subsequent indirect bilirubinemia. Peripheral blood smear revealed normocytic, normochromic anemia with slight poikilocytosis and no evidence of toxic granulations. LDH peaked to 1,118 U/L. Urine dipstick tested positive for hemoglobin. Coomb's test was negative.

Diagnosis: The patient was diagnosed to have hemolytic anemia based on a marked decrease in hemoglobin, hemoglobinuria, indirect bilirubinemia, and supporting literature that paradichlorobenzene indeed causes hemolytic anemia.

Treatment: Patient was given high-flow oxygen and ascorbic acid for his methemoglobinemia. Hemolytic anemia was managed supportively by blood transfusion.

Outcome: The patient was discharged improved after transfusion of 5 units of PRBC.

Significance: Hemolytic anemia is a rare, and often, a delayed complication of paradichlorobenzene ingestion and inhalation. Anticipatory care is therefore of utmost importance. To date, this

is the first reported case of hemolytic anemia, presenting initially as hemoglobinuria, from mothball ingestion in the Philippines.

Recommendations: This report will be submitted to the Department of Health, the Bureau of Food and Drugs, and the Fertilizer and Pesticide Authority with a recommendation to impose appropriate warnings on all products that contain paradichlorobenzene.

(37) Poisoning in Children: a 4-Year Review (2006–2009) on Cases Reported to the National Poison Centre of Malaysia

Nur Afni A, Rahmat A, Sa'ed Z, Sulastri S, Haslina H, Sazaroni MR.

National Poison Centre, Universiti Sains Malaysia, Penang, Malaysia

Objective: Poisoning involving children continues to represent the major poisoning emergency reported to the National Poison Centre (NPC). A better understanding of the pattern of acute poisoning in children is an important preventive strategy. The aim of this study is to elucidate the prevailing trend of acute poisoning in children based on the poisoning cases reported to the NPC.

Methods: Cases of acute poisoning involving children reported to the NPC between 1 January 2006 and 31 December 2009 were reviewed. Paediatric age groups were classified into four categories according to the IPCS-INTOX Data Management System (1 day–4 weeks: neonates; 4 weeks–12 months: infants; 1–4 years: toddlers; and 5–14 years: children). Age, date of exposure, reason of exposure, and type of substance involved in the exposure were evaluated. SPSS version 15 was used for descriptive analysis of the data collected.

Results: A total of 2,468 calls on poisoning involving children exposures were received, making up about 26.2 % of the total cases of poisoning during the study period. Of the total poisoning cases involving children, 1,593 (60.1 %) were in the toddler age group. Most calls were made by medical doctors 2,445(99.0 %). The number of poisoning calls was found to have significantly increased yearly from 385 calls (16 %) in 2006 to 902 calls (37 %) in 2009 ($p < 0.001$). The largest contributing factors in children poisoning was pharmaceutical substances, household chemicals and pesticide, which accounted for 968 (39.2 %), 906 (36.7 %), and 440 (17.8 %) cases, respectively. Majority of the exposures occurred at home 233 (94.6 %), through oral ingestion 2,432 (98.5 %), and were due to accidental poisoning 2,107 (85.3 %). Information on the patient's outcome was not available.

Conclusion and Recommendation: The increased number in poisoning calls involving children is alarming and should be highlighted at the national level for preventive strategy to be established. Since cases handled by the NPC constitutes a proportion of all poisoning cases handled by the emergency

department, a national study on the magnitude of poisoning with respect to the household chemicals and medication use should be carried out.

(38) Postmortem Cancer Registry in Deaths with a History of Exposure with Chemical Warfare Agents (CWA)

Ghasempouri S Kh¹, Mohebaty H², Afshari R¹, Rahimi R. H.³, Khosrojerdi H¹.

¹Medical Toxicology Research Center, Medical Toxicology Center, University of Medical Sciences, Mashhad, Iran.

²Legal Medicine Organization, Mashhad Iran.

³Department of New Sciences and Technology Medical School, Mashhad, Iran

Introduction: Chemical warfare agents (CWA) were used in bombs during the World War (I). These agents were applied against Iranian veterans 20 years ago by Iraq. The purpose of this study was describing autopsy pathologic findings in those with a history of CWA exposure after two decades.

Methodology: A retrospective study designed to evaluate autopsy records of all those with a history CWA exposure from 2009 to 2010 in Mashhad catchment area with a population of 2,000,000.

Results: A total of 56 cases were evaluated (1 % of all total reports). Mean (SD) age was 12.1 (5.5) years (36–84 years). Major cause of death was reported to be cardiopulmonary in 28 patients (50 %). In total, 11 cases (19.6 %) died due to cancer. Reported cancers were lung cancer, 4 (7.1 %); gastrointestinal, 3 (5.4 %); acute lymphoblastic leukemia, 3 (5.4 %); and a laryngeal cancer, 1 (1.8 %), which are relatively more common than in the general population.

Conclusion: This study revealed that deaths related to cancer are higher in cases with history of exposure to CWA. More drastic measures for these cases are recommended to evaluate presence of lung, gastrointestinal, and blood cancers in patients with history of exposure to CWA.

(39) Trend of Poisoning Cases Referred to the National Poison Centre of Malaysia from 2006 to 2009

Adilah M.A., Haslina H., Rahmat A., Sa'ed H.Z., Sulastris S. National Poison Centre, Universiti Sains Malaysia, Penang, Malaysia

Introduction: The National Poison Centre (NPC) of Malaysia provides 24-h Drug and Poison Information Service to health professionals and the general public. Most of the enquiries are related to poisoning cases, which were documented manually and electronically.

Objective: This study aimed to review and report the trend of poisoning cases handled by NPC for a period between 2006 and 2009.

Methods: In 2006, new classes of poisoning agents were introduced and certain classes were expanded into sub-classes based on the IPCS INTOX Data Management System. Age, gender, date of exposure, route of exposure, reason of exposure and type of poisoning were evaluated. Data were analysed using SPSS 18.0 to generate frequencies and percentages.

Results: A total of 9,413 poisoning cases were referred to NPC within the 4-year period with increased cases every year. Of the poisoning enquiries, 60.4 % were handled after office hours and the majority (99 %) of enquiries received were from medical doctors. Of the cases, 59.6 % involved adult patients and 56.3 % were intentional incidents. Pharmaceutical products (32.8 %) were the main substances implicated, followed by pesticides (32.2 %) and household products (23.8 %). Analysis of the sub-classes of the common substances showed that herbicides, insecticides and cleaning agents were the most common substances implicated. The majority of the victims were male who were mainly involved in pesticides poisoning. Exposure to poisoning occurred mainly via ingestion (94 %) followed by inhalation (2.3 %).

Conclusion: The trend of poisoning incidences from 2006 to 2009 was almost similar to the previous 5-year report. Pesticides and pharmaceutical products remain the main substances implicated. The increase in the number of poisoning cases handled yearly implies that the 24-h Poisoning Call Service remains relevant and important especially to new medical officers.

(40) A Call for Caution of the Emergency Physician's Interpretation of the New Paracetamol Toxic Ingestion Dose Guideline—a Paediatric Case Study and Review

Ong Yong-Kwang Gene.

KK Women's and Children's Hospital, Little India, Singapore

Recent toxicology guidelines worldwide for paracetamol poisoning have raised the definition of a single, acute paediatric toxic ingestion of paracetamol from 150 to 200 mg/kg. A 4-year-old Chinese girl presented with abdominal pain and vomiting was seen at the Kangkang Kerbau Women's and Children's Hospital's Emergency Department in Singapore. It was disclosed during the consult that the child had consumed 178 mg/kg of paracetamol elixir 26 h prior while left unsupervised at home. The parents denied any further ingestion of paracetamol after the non-intentional exposure. However, intravenous *N*-acetylcysteine was empirically started in view of the symptoms, and serum paracetamol level and liver enzyme assays were taken. A review of the records in the Emergency Department showed that the child was seen and discharged 2 days before for fever associated with a simple febrile seizure. She had taken three doses of 10 mg/kg (at six to seven hourly apart) of paracetamol elixir; with the last therapeutic dose 6 h prior to the non-intentional