Social and Environmental Aspects of Kerosene Poisoning in Children in Jeddah

ABED M. AL-HAZMI, ABPed.* and MOHAMMED A. IBRAHIM, Dr. PH**
* Department of Pediatrics and
** Department of Community Medicine & Primary Health Care,
Faculty of Medicine & Allied Sciences, King Abdulaziz University,
Jeddah, Saudi Arabia

ABSTRACT. The main objective of the present study was to identify the social and environmental aspects of kerosene poisoning in children, at King Abdulaziz Hospital (KAH), Jeddah. An open-ended questionnaire to the attending member of the family; by the attending physician in emergency was carried out in the Emergency Department KAH, during the period from April 1992 to May 1995. Kerosene poisoning was observed to be more common in children aged 1-3 years (86.5%), living in overcrowded homes (89.5%), with poor facilities (83.5%), and in homes where kerosene was stored in beverage containers easily accessible to the children, 80.5% of the families sought medical help within the first 2 hours after ingestion. Knowledge of toxic nature of kerosene was lacking in most of the families. The study indicated that kerosene poisoning was common in children of families living in overcrowded homes with minimum facilities, in which kerosene was easily accessible to children. Public awareness is needed to educate the families of the hazards of kerosene poisoning.

Keywords: Kerosene poisoning, Emergency, Overcrowded homes, Jeddah.
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Keywords: Kerosene poisoning, Emergency, Overcrowded homes, Jeddah.
Childhood poisoning is a universal problem which is usually accidental, and is associated with low morbidity and mortality. Observations of accidental child poisoning from different regions of Saudi Arabia, with the exception of Jeddah, have been reported. The purpose of this study was to determine the pattern of accidental poisoning in children reporting to the King Abdulaziz Hospital (KAH) in Jeddah. Attempts were made to determine related morbidity and mortality in affected children and to recommend strategies for prevention of accidental poisoning in children.

**Patients and Methods**

Children up to 12 years of age reporting to the Emergency Department (ED) of KAH and admitted to the Pediatric Unit or the Intensive Care Unit (ICU) during the time period of January 1994 to December 1996 were enrolled in the study. An open-ended questionnaire was administered in each case to obtain data, which included age, gender and preliminary diagnosis. Further information was obtained on the type of poison, source of poison, time of ingestion, time of seeking medical attention, clinical symptoms, duration of hospital admission and outcome in those children known to be suffering from accidental poisoning.

**Results**

A total of 1954 children were admitted to the Medical Pediatric Unit during the study period. Of these, 140 (7.2%) reported ingestion of toxic materials with or without symptoms of intoxication. A slight downward trend in the incidence of childhood poisoning was apparent over the three-year study period, as noted by the 51, 49 and 40 cases presenting in 1994, 1995 and 1996, respectively. The highest percentage of poisoning was in the 2-5-year age group (61%), as compared to 27% in 0-2, 9% in 5-10, and 3% in the 10-12-year age groups. The male:female ratio of the 140 children was 1.4:1. This ratio remained quite constant in the three age groups below 10 years and increased sharply to 3:1 in the oldest (10-12 years) age group.

Table 1 illustrates the types of poison identified in the 140 accidental child poisoning cases. Hydrocarbon ingestion accounted for the highest proportion of poisonings (56 cases, or 40%), followed by drugs in 48 cases (34.3%), and household chemicals in 23 cases (16%). Bleach—sodium hypochlorite, Chlorox—was identified as the causative agent in 11 (7.9%) of the cases, and rat poison (warfarin) and insecticides were observed in 8 children (5.7%). No information on the nature of the toxic substance ingested was available in 5 children (0.6%) presenting with symptoms of accidental poisoning.

Children ingesting pharmaceuticals were generally required to stay in hospital for only short periods. Of the 48 children with accidental drug ingestion, 30 (62.5%) were hospitalized overnight for observation, 38 (71.9%) stayed less than 48 hours, and all were discharged within 72 hours. Six children who had taken anticonvulsant drugs presented with symptoms of drowsiness, somnolence, and dizziness. Another six (12.5%) who ingested antihistamines presented with drowsiness and sleepiness. Ingestion of antiemetics (metoclopramide) resulted in manifestations of oculogyric crisis in 5 children (10.4%) in this group. Antipsychotic drugs, mainly hypnotics and sedatives, were ingested by 5 children (10.4%), antibiotics by 3 (6.2%), antidepressants, paracetamol, iron and corticosteroids in each of 3 children (6.2%), all of whom presented with only mild symptoms of intoxication upon arrival at the ED.

Of the 56 children with hydrocarbon intoxication, 54 reported having consumed kerosene. Of these, only 22 (40.7%) had mild symptoms, such as drowsiness, cough, vomiting, and tachypnea. Another 19 children (35.2%) developed pneumonia with respiratory distress, and these symptoms were further accompanied by fever in a group of 15 children (27.7%). The latter two groups stayed in the hospital for more than three days.

It was determined that half of the 22 children admitted for ingesting household chemicals had consumed bleach. Of these 11 children, 9 had hyperemia with mild circumferential burns. These symptoms were sufficiently
Kerosene Poisoning in Children, Jeddah, Saudi Arabia

ABED M. AL HAZMI, AB (Ped.)
The Department of Pediatrics, King Abdulaziz University, Jeddah, Saudi Arabia.

Abstract

Accidental kerosene poisoning is one of the most common forms of acute childhood poisoning in most developing countries. In this study one hundred and twelve children age between 10 months and 12 years were admitted to King Abdulaziz Hospital, Jeddah, Saudi Arabia, with history of kerosene ingestion; 93.8 percent were below age of 5 years, with male to female ratio 1.9:1. Drowsiness was the most common and early symptom occurring in 75 percent and lasting for a short period of time (2-6 hours); while respiratory symptoms were predominant, fever occurred in 58 percent of the children and was not present on admission but developed in the first 12 hours post ingestion. Acidosis and cyanosis on presentation as signs of severity were seen in four children, two of whom were severely ill and died from respiratory failure. Changes in the chest X-ray were noted in 56.2 percent of children on admission, with 28.6 percent perihilar infiltrate and 19.2 percent basal infiltrate. Others findings, such as pleural effusions, collapse of the lung, emphysema, pneumothorax and pneumomediastinum were seen on chest X-ray taken during the course of admission in ill patients. CNS manifestations other than drowsiness included irritability in 14.7 percent and convulsion in two children. Hospitalization of children of kerosene ingestion is always necessary, although symptomatic and supportive treatment is all what is required to stabilize the patient. It is recommended that there is a strong need to implement procedures for the safe storage of kerosene including other products which may be harmful to children. The Primary Health Care Services of the Ministry of Health must include parental education regarding the hazards of kerosene poisoning in children.

Key Words: Kerosene Poisoning - Childhood Poisoning.

Introduction

ACCIDENTAL kerosene ingestion persists as the most common category of ingested poisoning in developing countries [1-4], particularly in regions where kerosene is used as fuel for cooking, heating, lighting and cleaning purposes; a common practice in parts of Saudi Arabia [4-10]. Kerosene is a hydrocarbon product of petroleum; its toxicity is related to its volatility and involves mainly the respiratory and central nervous systems (CNS), although other systems may be involved [11].

This is a prospective study with the aim to explore the clinical manifestations and the outcome of kerosene poisoning in children. The study also attempts to recommend optimal management and preventative strategies to reduce morbidity and mortality in the affected children.

Patients and Methods

All the children of ages less than 12 years brought to King Abdulaziz Hospital (KAH), Jeddah with history of kerosene ingestion from January 1998 to 31 July 2000, were included in this study. Complete history was taken from the attendant on arrival and a full clinical examination, chest X-ray, complete blood count (CBC), blood gases, urea and electrolytes, liver function tests and additional tests were carried out according to the clinical indication.

Results

One hundred and twelve children were included in the study; 74 (66.1 percent) were male and 38 (33.9 percent) were female, 46 (41.1 percent) children were less than two years of age; 59 (52.7 percent) were between 2 years and 5 years and only 7 children were more than 5 years of age.

The quantities of kerosene ingested were less than 30 ml in 94 (84 percent) children. The kerosene was stored in beverage containers, such as water bottles and glasses in 104 (92.8 percent) of the children, with 69 (61.6 percent) placed in the kitchen and 38 (34 percent) in the courtyard. In 74 (66.1 percent) children the family did not administer to the child any home
IMIPENEM / CILASTATIN SAFETY AND EFFICACY IN NEONATE

A. Shaabat, A. Al-Hazmi, M. Farouq, R. Bader, S. Jaber

Department of Paediatric, King Abdulaziz University Hospital
Jeddah, Saudi Arabia

ABSTRACT

Objectives: To determine usefulness, efficacy and side
effects of the imipenem in neonatal sepsis.

Design: Prospective study of 18 neonate from January 1995
to December 1995.

Setting: King Abdulaziz Hospital (KAH) Jeddah, Neonatal
Intensive Care Unit (NICU).

Subject: 18 neonate, 7 fullterm and 11 preterm, 9 male & 9
female with mean weight 2.2 kg.

Interventions: All neonates admitted to NICU who
developed clinical signs and symptoms of sepsis were started
initially on ampicillin or penicillin and gentamicin after all
cultures had been taken. Those who had positive culture with an
organism resistant to the former combination of antibiotics but
sensitive to imipenem were started on imipenem intravenous as a
second line drug.

Results: All 18 neonates enrolled in this study recovered and
discharged except one who developed seizure on 3rd day of
therapy and died at age of two months due to underlying central
nervous system (CNS) malformations and infantile polycystic
kidney.

Conclusion: Imipenem/cilastatin is very useful second line
drug in treating neonatal infection, the risk of seizure is small and
probably related to the underlying CNS malformation.

Keywords: Imipenem; Neonatal; antibiotics.

INTRODUCTION

Imipenem is an antibacterial
agent of the carbapenem class of
beta-lactam, (Birnbaum, et. al. 1985),
it is combined with cilastatin (a renal
dehydropetidose inhibitor that
prevents renal metabolism of
imipenem) (Mustafa and Mc Cracken,
1989). It has a very broad spectrum of
activity that cover most gram-negative
and gram-positive organisms, aerobes
and anaerobes and with marked
activity against species producing
TRAUMATIC DIAPHRAGMATIC HERNIA WITH PERICARDIAL TEAR-LATE PRESENTATION

Daleel Al Rahman J.S., Jamal Y.S., Al-Hazmi, A.

King Abdulaziz University Hospital, Jeddah, Saudi Arabia

Traumatic rupture of the diaphragm occur in the left side. The diagnosis is usually late and this can be either missed, overlooked, or due to a late rupture of the devitalized portion of the diaphragm. Symptomatic presentation can be either mild or severe. The tear usually single but double tear or associated pericardial, myocardial injury can also occur. In this paper we present a case of late presenting post traumatic diaphragmatic hernia associated with pericardial tear.
SYSTEMIC CANDIDA INFECTION AT KING ABDUL AZIZ UNIVERSITY HOSPITAL JEDDAH.

By
Aisha Al Ghamdi, Abed Al Hazmi, Faiza Al Sini, Fatma Al Zahrani
King Abdulaziz University Hospital, Jeddah.

Candida infection in hospitalized patient is increasing significantly over the last 10 years. Particularly in the patients in the Intensive Care Unit who have invasive monitoring lines. Candida infection leading to prolonged hospitalization and significant mortality which dictate the need to take all the possible measures to prevent this infection particularly at the high risk patients. We study 15 cases which developed this type of infection in King Abdulaziz University, Jeddah over 5 years period aiming at identifying the risk factor of candida infection in our patients with particular attention to the patient with high mortality, in turn we suggest the universal preventive measures for patients at risk of infection and additional prophylactic treatment for the patients at lethal risk.

Key words: Candida, systemic, risk factors, preventive measures, intensive care unit.
PREVALENCE OF HIP JOINT INSTABILITY (DDH) IN KAUH IN JEDDAH, SAUDI ARABIA
A CORRELATION BETWEEN CLINICAL AND SONOGRAPHIC SCREENING


ABSTRACT

The incidence of the hip instability due to DDH (Developmental dysplasia of the hip) was studied in the nursery department at KAUH (King Abdulaziz University Hospital) from November 1995 to October 1996. Eight hundred nine newborn babies with 1618 hips were screened both clinically and with Graf's ultrasound techniques. Babies with neuromuscular disease or those referred with other medical problems were excluded.

The incidence was found to be 10.3% with more prevalence in female newborn babies (6.6%) compared to male (3.7%) using ultrasound screening. Racial status had an insignificant effect in DDH incidence (5.6% in Saudi, 4.7% in non-Saudi). The higher incidences of DDH in the first 24 hours could be related to mother's relaxin hormone that fades away within a short duration ($\pm$ 4 weeks). It could also be related to Graf's ultrasound type IIa- which usually normalizes spontaneously later in life. A recommendation for early detection is to carry out the screening for DDH by the age of 6-8 weeks.

INTRODUCTION
The influence of eczema on the severity of asthma: a case-control study.
Abstract

Eczema is often the first evidence of atopy in children with asthma. The aim of this study was to verify whether eczema could influence severity of asthma.

We compared two groups of 20 children one affected with eczema and asthma (group1), the other by asthma only (group2), the 40 children were matched for gender, and were followed for 5 years in pediatric clinic. All children were tested for atopic status (skin test), and severity of asthma both at enrollment, and at the end of the study.

Severity of asthma was defined according to number of hospitalizations for asthma, number of asthma attacks, and number of medications taken for asthma (number of medications for number of day's therapy).

We find that the eczema and asthma group showed more severe asthma, with more asthmatic attacks and hospitalizations at the time of enrollment (p=0.026), although the severity of the asthma symptoms was comparable in both groups with appropriate therapy during the study period.