
Original Article

The Study of Children Poisoning in 3895 Patients Residing in Tehran

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ABSTRACT

Background: *Poisoning is a health hazard in every country and is currently responsible for 7% of world mortalities and this proportion is predicted to rise. This study was performed to determine the incidence of unintentional children poisoning in Tehran.*

Materials and Methods: *This was a retrospective study which was performed in one year (2003). Clinical and para clinical investigations were performed including WBC count, BG, and determination of the blood level of drugs. Chest-x-ray was taken if needed.*

Results: *A total number of 3895 patients were admitted and investigated, out of which 3790 were out patients (97.3%). Most cases were at the age range of 2-3 years. 25% were under 6 years of age. kerosene was the most common cause of poisoning in 908 patients (23.5%) followed by whitening products (whitex) in 331 (8.5%) patients.*

Conclusion: *During the past years, morbidity and mortality due to infectious diseases have been controlled in Iran. However at present a high proportion of children are victims of unintentional poisoning because all age groups are at risk of poisoning. Since in most cases poisoning is preventable it must be considered as a priority in health control programs in Iran.*

Key words: *Unintentional, Accidental, Hydrocarbon (Gasoline, Kerosene, Petroleum).*

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INTRODUCTION

High incidence of accidental poisoning in children can result in life long disability. It is a health hazard in every country and is currently responsible for 7% of world mortalities and this proportion is

predicted to rise. It is wrongly believed by some that accidents and poisoning are problems that belong to developed countries. They are perhaps just as common in all countries but the consequences are often more serious. Strategies for preventing

poisoning have been extensively studied in many developed nations (1-7). According to a national report on vital statistics in Iran, after chronic heart diseases, injuries and poisoning are the most common causes of deaths in different age groups (8). On the other hand, as we think about air pollution, lead, carbon monoxide and hydrocarbons poisoning in Tehran with 16 million population, we are all poisoning victims. In this study, we determined the incidence of unintentional children poisoning in Tehran.

MATERIALS AND METHODS

In this retrospective study clinical and para-clinical data including WBC count, U/A, blood level of drugs, and chest x ray results (performed if needed) were collected and a check list about the type of toxic material, age, sex, description of poisoning (what, how much, when), type of treatment and mortality was filled out.

RESULTS

A total number of 3895 patients were admitted and investigated, out of which 3790 were out patients (97.3%). Mildly intoxicated patients were hospitalized for 4-6 hours while moderately intoxicated patients were hospitalized for 24-48 hours and were treated by induction of vomiting by ipecac syrup, and gastric lavage as out patients. Highly intoxicated patients (105 cases) (2.7%) were hospitalized for longer periods. Four patients died (due to toxicity with Kerosene, acetaminophen, organophosphate, and unknown drugs). Sixty percent were males. Most cases were at the age range of 2-3 years. Twenty-five percent were under 6 years of age. Table 1 shows numbers and types of products as well as most common symptoms of poisoning in patients.

Kerosene (Hydrocarbons) was the most common cause of poisoning in 908 patients, (23.5%) followed

by whitening products (Whitex) in 331 patients (8.5%). Benzodiazepines were the cause of poisoning in 328(8.4%) patients, unknown drugs in 241 (6.1%), food poisoning in 212(5.4%), non-steroid inflammatory sedative drugs in 192 (4.9%), anti psychotics in 160 (4.1%), hormones (contraceptives and thyroid tab) in 135 (3.5%), antidepressants in 126 (3.2%), anti cholinergic drugs in 123(3.1%), antihistamines in 120(3%), Imipramine in 83, acetaminophen in 61, Phenobarbital in 58, Eskazina in 56 and ibuprofen in 52 cases.

Table 1. The most common causes of children poisoning

	Cause of poisoning	No (%)	symptom	inpatient	Death
1	Hydrocarbons	908(23.5%)	Cough-distress	46	1
2	Whitex	331(8.5%)	Vomiting	0	0
3	Benzodiazepine	328 (8.4%)	Sleeping	3	0
4	Unknown drugs	241 (6.1%)	Vomiting, sleepiness	4	1
5	Food- poisoning	212 (5.4%)	Vomiting	1	0
6	NSAIDS	192 (4.9%)	Vomiting	3	1
7	Antipsychotic	160 (4.1%)	Sleeping	9	0
8	Hormones	135 (3.4%)	---	0	0
9	Antidepressants	126 (3.2%)	Sleeping	6	0
10	Anticholinergics	123 (3.1%)	Vomiting, mydriasis	3	0
11	Opium	103 (2.9%)	Myosis		
12	Anticonvulsants	84 (2.2%)	Sleepiness	8	0
13	Cardiac drugs	79 (2.1%)	Bra-Tachycardia	1	0
14	Antidiuretic	76 (1.9%)	---	3	0
15	Organophosphate	72 (1.8%)	Vomiting	10	1
16	Eucalyptus	66 (1.7%)	Vomiting	0	0
17	CO-poisoning	51 (1.3%)	Distress-cyanosis	0	0
18	Ethanol	43 (1.1%)	Ataxia	0	0
19	Acid- Alcohol	42 (1%)	Burns	3	0
20	Stings	42 (1%)	Local-pain	1	0

DISCUSSION

Special attention should be paid to the high incidence of poisoning in children all over the world. Different types of poisoning are reported in each country.

This study showed that many children are at risk of unintentional poisoning and it is a major cause of mortality and morbidity in Tehran.

Berger and Mohan explained that most accidents in developing countries are traffic accidents, falls, drowning and poisoning. However, poisoning in Tehran residents is quite different and high prevalence of hydrocarbon poisoning is noted in our results.

Dr. Marandian et al. studied 3462 cases of hydrocarbon poisoning during 5 years and showed some prevalent data (7). It is estimated that each year 2000 cases of hydrocarbon poisoning occur in children in Tehran and half of them are referred to Loghman poisoning center. This study also showed types of products which are usually responsible for poisoning such as drugs that are available in home, antidepressants (Imipramine), sedatives, ibuprofen, acetaminophen, aspirin or chemical agents such as Whitex and all kinds of other products. We recommend keeping these products out of the reach of children. Because all children at all age groups are victims of unintentional poisoning most of which being preventable. Therefore, it must be considered as a priority in health control programs in Iran. Also, professional emergency poisoning centers should be established in Tehran and other cities of Iran.

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