

PATTERN OF ACUTE CHILDHOOD POISONING – A RETROSPECTIVE STUDY IN ABHA CITY

Mohammad A. Awwad Alqahtani¹, Razan S. Alhumayed², Alhanooof A. Alshahgrood³, Alaa A. Alqahtani⁴, Abdullah M. Alqahtani⁵, Abdullah S Almakl⁶, Rishi Kumar Bharti⁷, Shweta Chaudhary⁸

¹Assistant Professor and Endocrinology Consultant, Child Health Department, College of Medicine, King Khalid University, Abha, Saudi Arabia and Head of Paediatric Endocrinology and Diabetic Unit, Ab ha Maternity and Children Hospital, Abha, Saudi Arabia.

²Demonstrator, Family and Community Medicine Department, College of Medicine, King Khalid University, Abha, Saudi Arabia.

³Medical Student, King Khalid University, Abha, Saudi Arabia.

⁴Medical Student, King Khalid University, Abha, Saudi Arabia.

⁵ER Resident, Armed Forces Hospital, Southern Region, Khams, Saudi Arabia.

⁶Medical Director and Head of Emergency Department, Abha Maternity and Children Hospital, Abha, Saudi Arabia.

⁷Assistant Professor and Consultant, Family and Community Medicine Department, College of Medicine, King Khalid University, Abha, Saudi Arabia.

⁸Assistant Professor, Department of Anatomy, College of Medicine, King Khalid University, Abha, Saudi Arabia.

ABSTRACT**BACKGROUND**

Childhood poisoning is a major cause of morbidity and mortality in both developing and developed countries.

The objectives of the study are to assess the pattern, causes, frequency and formulate measures to increase public awareness of childhood poisoning in the region.

MATERIALS AND METHODS

Retrospective study for pattern of paediatric poisoning in Abha city for one year starting from first of May 2016. 209 cases were seen in Emergency Department of Abha Maternity and Children Hospital in Abha City. The total number of children less than 15 years in Abha were 9600 giving annual incidence 2.1%. Data collected and filled by medical students and analysed by SPSS (Version 21.0).

RESULTS

132 female and 77 male (1.7:1). Two peaks were seen. At the age from 2 to 3 years and 7 years, it was found to be more in children served by caretaker other than those by their mothers 138:71 (1.94:1). Food poisoning seen more in children at the age from 6 to 7 years about 93 cases (44.5%). Whereas drug poisoning more seen in children from 2 to 4 years with predominance of Ibuprofen 39 cases (19%) followed by paracetamol 22 cases (9%). Asking their mothers about receiving any education about poisoning only 9 out of 209 (4%) which reflects the high needs for more educational programs for childhood and bearing age mothers. Unfortunately, one case died with Digoxin poisoning at age of 4 years; arrived late to the ER and died one day after arrival.

CONCLUSION

Childhood poisoning still an important cause of mortality and morbidity which shows need of more public educational programs and continuous medical education for ER doctor.

KEYWORDS

Poisoning, Children, Risk Factors, Food Poisoning, Analgesic.

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Corresponding Author:

Dr. Mohammad Ahmad Awaad Alqahtani,

Assistant Professor,

Professor and Endocrinology Consultant,

Child Health Department,

College of Medicine, King Khalid University,

P.O. Box 641, Abha, Saudi Arabia.

E-mail: maawadalqahtani@gmail.com,

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**BACKGROUND**

Acute poisoning in children is still an important public health problem and represents a frequent cause of admission in emergency units. The incidence of acute poisoning in both developed and developing countries is increasing all over the world during the last few years. This makes the problem of childhood poisoning very likely to get much worse.^{1,2} Accidental ingestion of drugs, poisons and household substances, a potential source of morbidity and mortality in children all over the world, is a significant public health problem.

The purpose of this study was to highlight on the problem of accidental poisoning among children, to

determine the factors related to accidental poisoning by the most common medications and household agents and finally to describe the epidemiology, pattern, severity of poisoning and the results of treatment of poisoned patients who were visited a paediatric ER section in Abha Maternity and Children Hospital for 1 year from 1st May 2016.

MATERIALS AND METHODS

Retrospective study was conducted for 1 year from 1st May 2016 at paediatric emergency department in Abha Maternity and Children Hospital which is receiving catchment area of 21 primary health care centers to assess total numbers of cases seen with acute childhood poisoning in that period. After ethical committee approval, questionnaire was used to gather the information and filed by medical students involved in this study. Children of 14 years and below were involved in this study. Data was analysed by SPSS (Version 21.0) and interpreted.

RESULTS

Over this period 209 cases were seen in emergency Department of Abha Maternity and Children Hospital with 132 female and 77 male showing ratio of 1.7:1 reflecting more cases among female children. Two peaks were seen at age of from 2-3 years (42, 30 cases respectively) and at age of 7 years (31 cases) (Table 1). Poisoning cases (93 cases) were found to be more in children served by caretaker 70 cases (75%) other than those who were served by their mothers 23 cases (25%), giving ratio of 3:1. Food poisoning seen more in children at age of 6-7 years 93 cases with percentage of 44.5% while drug poisoning 78 giving ratio of 37.3% of the total.

Age	Number	%
1	20	9.569
2	42	20.095
3	30	14.35
4	16	7.655
5	21	10.04
6	21	10.04
7	31	14.83
8	18	8.61
9	7	3.349
10	2	0.956
11	1	0.478
Total	209	100

Table 1. Frequency of Age

Drug poisoning were seen more in children from 2-4 years with predominance of ibuprofen 39 cases (50%) followed by paracetamol 22 cases (28%) as in (Figure 1), When we analyse the caregiver in those with drug ingestion we notice that 49 cases were served by care giver (62.8%), and 29 of cases were served by their mothers (37.2%). Comparing these ratios of food poisoning with drug poisoning ratio, we notice that mother ratio was increasing from 25% to 37.2% respectively.

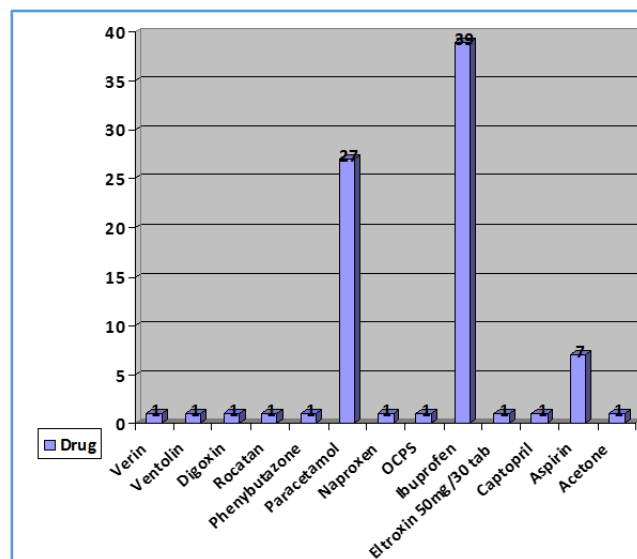


Figure 1. Drugs that Cause Poisoning

Insect bites were seen 19 cases (9% of the total cases). Clorex ingestion 9 cases (4% of the total cases). Scorpion sting 7 cases (3% of the total) and 3 cases others cause. Of 209 cases seen in emergency department 27 cases were admitted (13%) unfortunately one of them arrived late to the emergency department with digoxin ingestion of unknown amount resuscitated, ventilated and died after 1 day of arrival. When asking mothers about receiving any education about poisoning only 9 mothers of 209 were educated before the event (4%) which reflect the high needs for more educational programs for childhood bearing age mothers.

DISCUSSION

Acute poisoning is one of the critical causes of Emergency Department (ER) admissions. In our study over period of one year from 1st of May 2016, 209 cases of poisoning were seen in ER of Abha Maternity and Children hospital with 132 female and 77 male showing more predominance of female ratio of 1.7:1 in opposite of the previous publication.^{2,3,4,5}

Food poisoning was the commonest 93 cases with percentage (44.5%) with peak at age of 6-7 years and it was more in children served by caregivers (75%). Drug poisoning was the 2nd 78 cases (37.3%) with caregiver (62.8%). Comparing these ratio of food poisoning with drug poisoning ratio we notice that mother ratio were increasing from 25% to 37.2% respectively which was expected as the mothers more close to their children at early age group.^{6,7,8} Unfortunately only 4% of mothers were educated before this event which reflects the high needs for more educational programs for childhood bearing age mothers .in primary health care and also in mass media.

Insect bite and scorpion sting were seen in 26 cases (12.5%) can be avoided by wearing shoes and special education for families and their children when they are going outside.^{9,10}

One of the major causes of Clorex ingestion was keeping the Clorex in the cup or water bottle which can be avoided by education to the families.¹¹

The unfortunate case of digoxin ingestion which came late that makes management is difficult ended by death.^{12,13,14}

CONCLUSION

Childhood poisoning still an important cause of mortality and morbidity which shows need for more public educational programs and continuous medical education for ER doctor. Educational programs for children and bearing age mothers in all sectors of health care and mass media should be highly considered. Parents should supervise what their children eat, particularly when they eat food brought from outside the house and should be advised to bring their child immediately to ER in case of poisoning. Free call centers should be advisable to facilitate for the families and health care provider.

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