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Accidental Poisoning

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Accidental poisoning in children is one of the commonest emergency encountered in pediatric practice. The reported incidence of childhood poisoning in various studies varies from 0.3 to 7.6% (1,2) which constitutes a significant number of admissions to the pediatric wards. So far, different

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regional studies are not available to exhibit the incidence and patterns of different poisoning. The present retrospective study aims to find out the incidence, morbidity and mortality of different poisonings in children.

Material and Methods

This retrospective study was carried out in J.L.N. Medical College and Hospital, Ajmer. Records of all poisoning cases admitted in children ward during period June, 1987 to May, 1993 were analyzed. Children with idiosyncratic reactions to prescribed drugs were not included.

Results

Of 20,011 patients admitted from June 1987 to May 1993, 223 (1.1%) were of accidental poisoning. The commonest age group was 0-5 years constituting 81.2% of total patients of poisonings, followed by 5-10 years (16.1%). There was an overall male predominance, with male to female ratio of 1.6: 1.

In the 0-5 years age group, the mode of

poisoning was oral in 94.1% patients and parenteral in 5.5% patients. In 5-10 years age group, oral route constituted 66.7% cases. In children above 10 years, both routes were almost equal.

The incidence of poisoning was 41.7% in summer, 33.6% in rainy and 24.7% in winter season. Kerosene poisoning occurred throughout the year, peaking in summer while maximum cases of snake bite were seen in rainy season with no case recorded during winter.

Accidental ingestion of kerosene was the commonest poisoning (48.8%), followed by accidental ingestion of drugs (11.7%), and snake bite (11.2%). Other causes included dhatura poisoning (8.1%), food poisoning (7.2%) and ingestion of Paris Green (3.1%). Of all the cases, 3 patients, two of snake bite and one from severe dhatura poisoning, died.

Kerosene Poisoning

Accidental ingestion of kerosene oil was the commonest poisoning in this study. The amount ingested could not be calculated properly. However, it was never more than 10-15 ml. Of 109 cases (48.8%), 29 (13.3%) were asymptomatic. The common symptoms included cough (75.8%) and fever (66.9%). Other symptoms were restlessness, vomiting and drowsiness. X-ray chest showed features of pneumonitis in 44 cases (40.3%) only. All cases recovered.

Snake Bite

Snake bite was commonest among parenteral poisoning. Out of total 20 cases, 15 (75%) were due to nonpoisonous snakes. Out of 5 poisonous, 3 cases presented with hemorrhagic manifestations and one each with paralytic features and local cellulitis.

Drugs: Of 26 cases of drug ingestion, phenothiazine was ingested in 11 (42.3%),

codeine group of drugs in 5 (19.2%) and iron tablets in 3 (11.5%) patients.

Discussion

The reported prevalence of accidental poisoning in children varies from 0.3% to 7.6%. The prevalence in our study was 1.1%, which is similar to those reported by various authors (1-7) (*Table 1*).

The commonest accidental poisoning in children was ingestion of kerosene oil accounting for 48.9% cases. This is in agreement with the already reported childhood poisonings (*Table 1*).

Accidental poisoning in children is preventable. The incidence of oral poisoning has declined. This may be due to increased literacy, urbanization and better child care. On the other hand, there is increased incidence of poisoning due to various medications. This increased incidence may be attributed to easy availability of drugs from medical shops without physician's prescription, repeated administration of drugs by parents without the advice of treating physician, less knowledge of drug dosage and interactions to most of the private practitioners.

The patterns of poisoning are also changing. This may be due to less availability of some previously used offending agents, as seen with poisonings due to barbiturates and opium. Newer drugs and chemicals are replacing the older ones. Paris green, which is used in malaria control programme, accounted for 3.6% of all poisoning cases in our study. Poisoning with this substance has not been reported in earlier studies.

As all these cases are preventable, there is need to strengthen the preventive measures. All poisonous substances, drugs and chemicals should be kept out of the

TABLE I—Prevalence and Mortality in Different Studies on Childhood Poisoning

Authors	Period of study	Poisoning		Prevalence	
		Prevalence (%)	Mortality (%)	Kerosene (%)	Drugs & chemicals (%)
Manchanda	1955-58	1.7	6.7	37.5	16.4
Ghosh	1958-61	2.3	3.9	38.9	12.7
Buhariwala	1962-66	7.6	2.8	59.7	13.7
Agarwal	1970-71	1.8	1.1	40.4	12.5
Satpathy	1971-75	0.3	2.0	31.6	27.5
Chatterjee	1977-79	1.9	Nil	44.0	35.7
Kumar	1984-88	1.8	3.0	30.0	11.0
Present study	1987-93	1.1	1.3	48.8	11.6

reach of children. As the kitchen is the commonest place of poisoning, use of standing type of kitchen should be encouraged. Other measures include adoption of safe packings, child proof bottle caps, training of paramedical workers and rural health personnel about basic principles of identification and safe storage of potentially dangerous substances. Mass media such as TV, radio, newspapers can be used for spreading the simple rules of prevention of poisoning. Legal enforcement of over the country sale of drugs should be done. Treatment should be instituted promptly and flow charts for emergency management and specific antidotes should be available at all health centres.

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