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### ASSESSMENT OF SEVERITY GRADING OF ACUTE POISONING IN CHILDREN

#### THESIS

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#### **INTRODUCTION**

Acute poisoning is a real problem in developed as well as developing—nuntries. It is not isolated to any geographic or social group and should be the oncern of every practicing physician. It has to be treated with maximum effort from—edical, psychological and social aspects. (1) Children are more frequently exposed to bisons than any other group, and poisoning is a significant cause of pediatric injury—norbidity. (2,3)

#### lauses of acute poisoning in children

here are four different causes (4):

- True accidental ingestion of a drug, household product, plant product, or any other substance, which the child has obtained.
- 2) Children mostly of the older age group (10 <20 years) can deliberately take poison as an act of panic in an effort to seek attention or an attempt to commit suicide.
- 3) Children can be deliberately poisoned by their caregivers. This is a form of non-accidental injury.
- 4) Children can accidentally receive an overdose of a therapeutic medication.

#### Risk factors in acute poisoning of children and adolescents:

#### (A) Risk factors in childhood poisoning (5,6)

- Poisoning in children has its basis in several factors:
- 1. The availability of a poison in the child's environment.
- 2. The ability of a child to explore the environment.

Environmental factors including such things as parental factors, the child's own stage of development, and outside factors modifying the family organization.

#### Availability of a poison in the child's environment:

Availability and accessibility of poisons has direct relation to the incidence of childhood poisoning. In a survey done on childhood poisoning, the most gnificant finding concerns the place where the container was kept when the child of it. In no less than four-fifth of all recorded cases, the container have been bund in inappropriate place, and thus more accessible to the child than it should have een. (7,8)

#### Ability of the child to explore the environment:

Accidental poisoning is most frequently encountered in children between the age of 1 and 5 years, at this age, it is the consequence of newly-acquired independent nobility, innate curiosity and a predilection for exploring the environment with the nouth as well as the eyes and fingers. Children under 2 years (creepers) would be poisoned by agents stored at low levels and that children above this age (climbers) would be poisoned by agents stored at higher levels. (5)

#### 3. Environmental factors:

A study was carried out in Los Angeles USA, to investigate the types of substances used among children who regularly care for themselves after school. The data collected from 4932 eighth-grade students, indicated that self-care is an

important risk factor for alcohol, tobacco, and marijuana use. (9) Family stress is an important factor in road accidents in children, and it is a clinical impression that this is also true of childhood poisoning. The important role of family stress in the etiology of childhood poisoning was hinted in a large retrospective psychiatric survey in the USA. (10)

In a survey done in Great Britain in 1974 (11) on stress in families of children who have ingested poisons, five major stress factors were introduced in the survey: 1. Serious family illness, 2. Pregnancy 3. Recent family moves, 4. One parent away from home, 5. Anxiety or depression in one or both parents.

This survey shows clearly that family stress is an important factor in accidental ingestion of poisons in childhood. There are various reasons for this: Family stress may make poisons readily available to children, either because parents under stress may be less careful, or because medicines are being used during an illness. This increased availability is a factor in some cases but does not seem to be the major cause of the problem as a whole. A more likely possibility is that children's behavior is altered where there is unhappiness in the home with disordered family relationships. In addition, children may wish to medicate themselves imitating their parents. (11,12)

#### (B) Risk factors in adolescents with suicide attempts

Suicide is the third cause of death during adolescence and the second cause in young adults in USA. Statistics indicate that the number of adolescent suicide has increased dramatically in the past decade, resulting in more than 5000 deaths annually for youths between 15 & 24 years of age. Among children and younger teenagers between age 5 & 14 years, suicide increased from 205 deaths in 1983 to 232 in 1984. (13)

The group at highest risk for successful suicide is older adolescent males

ho suffer from depression, who have made previous suicide attempts, and who

use alcohol or other substances. The break up of a romance or being "kicked out of
e family" can also be a precipitant of a suicidal attempt by a depressed teenager (14)

In a study to determine risk factors for attempted suicide during adolescence, predictive model based on self-reported variables was developed, they are: 1. dolescents who have received mental health care, or 2. Who have attempted suicide efore, 3. Marijuana use, and 4. School failure. (15 & 16)

Psychiatric evaluation of suicidal adolescents differs from that of adult—sychiatric patients. With adult patients, families are involved minimally or—ometimes not at all. With suicidal child or adolescent, suicidal thought or ysfunctional behaviors may be the product of biologic mental illness or may be—econdary to various dynamics operating within a family system. (17)

#### Circumstances of childhood poisoning:

Several characteristics associated with poisoning in children 1< 6 years that =lifferentiate them from ingestion in adolescents 13<17 years or adults .1. They are vithout suicidal intent; 2. There is usually only one substance involved; 3. The =substances are usually non-toxic; 4. The amount is usually small; 5. Children usually present for evaluation soon after ingestion. The peak age for childhood poisoning is petween 1 & 3 years. (18,19)

Unintentional ingestion is unusual after age 5 and may reflect mistaken consumption of a substance from a mislabeled container. Between the ages of 5 and poisoning may be a reflection of intrafamiliar stress or suicidal intent. After age 9 and through adolescence, overdose or poisoning exposure frequently results either