A CLINICAL STUDY ON TRAVEL RELATED POISONING


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DMCH.
Poisoning is an important health problem in Bangladesh causing around 3,000,000 episodes and around 2,000 death per year.

Poisoning is important for health ground as well as for economic and social reasons.

There was a change in the trends of pattern of poisoning over the recent decades from Endrine poisoning to organophosphorus poisoning as an agent of attempted suicide; from dhutura poisoning to unidentified stupefying agent particularly during journey.

The poisoning happening during movement using public transport is an emerging social and public health emergency in Bangladesh. This emergency health problem was not adequately addressed in Bangladesh before.
OBJECTIVES OF THE STUDY

Primary:

- To describe the clinical aspects of cases of poisoning happened during movement / travel by using public transport.
- To document the outcome of such cases of poisoning.

Secondary:

- To record complications if any during hospital stay of such cases of poisoning.
Type of study: It was a prospective study.
Place of study: One of the five adult medicine unit of Dhaka Medical College Hospital, Dhaka.
Selection of subjects: Patients with / history of induced poisoning on journey or suspected to be such cases admitted in Green Unit of DMCH were evaluated.
MATERIALS AND METHODS

Inclusion criteria:

- Adult patients admitted in medicine units of Dhaka Medical College Hospital following suspected poisoning during travel using public transport.
- Glasgow coma score, 3-14.

Exclusion criteria:

- Diagnosis of any other cause of poisoning by deliberate self harm using substances like pesticide, sedatives etc.
- Presence of any other organic cause of coma.
- Unwilling to give informed consent by patients or patients relatives.
MATERIALS AND METHODS

DATA COLLECTION

- All data were collected in individual case record form. Urinary benzodiazepine levels and other necessary investigations results were collected and recorded in an attached sheet.

- Benzodiazepine was assayed in a private diagnostic facility and method followed was Fluorescence Polarization Immunoassay technique. Before data collection, written informed consent was taken from patient himself / herself or his /her attendant.

- Urine sample was collected within 12 hours of hospital admission.
January to June 2004 inpatient of Green Unit of DMCH.
Poisoning cases were 18.8% of total admitted patients.

The ratio of poisoning and total patients.
Among other poisoning — sedative, rat killer, organo phosphate, organo chlorine, antipsychotic, harpic, mosquito coil, alcohol, kerosene, puffer fish, snake bite, soda, gul, cannabis, paracetamol, fume intoxication were noted.

Pattern of Poisoning and induced poisoning

![Bar chart showing the number of poisoning patients and induced poisonings per month.]

**Month**

- Jan: 63 poisoning patients, 35 induced poisonings
- Feb: 36 poisoning patients, 22 induced poisonings
- Mar: 74 poisoning patients, 27 induced poisonings
- Apr: 64 poisoning patients, 28 induced poisonings
- May: 44 poisoning patients, 19 induced poisonings
- Jun: 68 poisoning patients, 41 induced poisonings

**Pattern of Poisoning and induced poisoning**
Induced poisoning 172

Unwilling to give informed consent 32

140 patients

Presence of other organic causes of coma 10

130 patients

Evaluated for induced poisoning

Patients evaluated for induced poisoning.
Age pattern of induced poisoning patients.
Sex distribution of induced poisoning was male: female = 98.4 : 1.6.

Sex ratio of induced poisoning patients.
Pattern of monthly income.
Pattern of occupation
Incidence hours in a particular day.
Time between induced poisoning and hospital admission.
Circumstances of induced poisoning patients.
Contents ingested
Pattern of rescuing
Lost item evaluation
Pulse

- Tachycardia, None
  - Normal – 108
  - Bradycardia – 22

BP

- Hypertensive – 26
  - Pre-hypertensive – 15
  - Normotensive – 55
  - Hypotensive – 34
Respiration

Tachypnoea - none

Normal – 108

Respiratory rate <12/minute - 22

Temperature

Increased temperature –7

Normal – 114

Hypothermia –9
Evaluation of patients for level of consciousness.

- 130 patients evaluated
  - 116 patients
    - GCS 3 (14)
    - GCS 4-10 (20)
  - 96 patients
    - GCS 11 - 14
130 patients evaluated

- 20 patients had bilateral normal sized & normal reacting to light pupil.

110 patients

- 26 patients had bilateral constricted pupil with non-reacting to light.

84 patients

- 6 patients had dilated with non-reacting to light.

78 patients

Mid dilated pupil with sluggish reaction to light.

Pupillary evaluation
130 patients

36 patients supplied no urine.

94 patients

24 patients had no significant urinary BDZ

70 patients

36 patients had got urinary BDZ level $\geq 200$ ngm/ml up to 500 ngm/ml

34 patients

20 patients had got urinary BDZ level $\geq 500 – 1000$ ngm/ml

14 patients

12 patients had got urinary BDZ level $\geq 1000-1500$ ngm/ml

2 patients had got urinary BDZ level $\geq 1500$ ngm/ml.

Patients evaluated for urinary benzodiazepine
Hospital stay time
Outcome

- Complete recovery
- Recovery with sequelae
- Absconded
- Death
The patients were managed in this study in a very busy admitting unit. Many patients were managed in hospital floor. Few patients had accompanying relatives with them. Hospital facilities, logistics and staff could not cope with such number of admitted patients. Young trainee doctors and nurses managed the patients with resource limitations. Usually this type of victim don’t require specific treatment other than maintenance of nutrition, fluid replacement and nursing care.
A team of healthcare professionals including doctors, nurses, paramedics can be build up. A separate day care room close to emergency department can be set up which can be utilized by all admitting adult medicine units in Medical College Hospitals for improved management of such cases. These type of patients require support from humanitarian point of view.
The incidence is increasing and pattern is changing day by day as urbanization is going on.

Special measures should be taken for management of cases.

Steps should be taken by law-enforcing agencies to identify the offending agents and culprit by vigilance.

Social mobilization for safe travel needs to be created

Advice should be given to the public not to take food items on the travel particularly from an unknown person.
Special measures should be taken by the hospital administration for urgent management of these unaccompanied victims.

The facility of chemical identification of the induced poisoning should be made available for more effective, specific treatment of the patients rather relying on supportive treatment only.
THANK YOU ALL