Targeting 100% Survival In Toxicology Cases

Dr. Virendra Kr. Goyal¹, Dr. Radhey Shyam Gupta², Md. Dr. Pramod Sarwa³

¹Md, Ficp, Fiacm, Associate Prof. Medicine
²Associate Prof. Medicine
³Md (Anesthesia), Fpa

CORRESPONDANCE ADDRESS: Dr. Virendra Kr. Goyal
MD, FICP, FIACM.
142-A, Taruchaya Nagar, Tonk Road, Jaipur (Rajasthan)
Mail: virendra601@yahoo.co.in

Introduction:

- WHO states, globally more than three million of acute poisoning cases with 2, 20,000 deaths occur annually. (WHO-1999).

- It has been estimated that, in India five to six persons per lakh of population die due to acute poisoning every year. (Narayana Reddy, 2010).

- Poisoning is the fourth common cause of mortality in India. (Unikrishnan et al., 2005)

- According to various studies organophosphate forms the commonest poisoning agent¹.

- Mortality in organophosphorus is 18 to 20% ²,³.

Keywords:


It was observed that in rural & semiurban population of India, organophosphorus outnumber all poisoning cases (25% of all cases) & second most important is Aluminium phosphide (celphos) (24% of all cases reported). Both are serious causes for morbidity and mortality among all poisoning cases. The third important is snake bite (21% of all cases), which carries less morbidity & mortality, if diagnosed & treated in time at a reasonable good center by qualified personnel.
Number of toxicology cases = 93
Prospective Study Period = February 13 to November 14

Sex distribution: The sex distribution was showing preponderance of some sex in particular type of poisoning as depicted in the chart.
**Ventilator required:**

The requirement of mechanical ventilation is depicted in the diagram. It is quite evident that most of the cases of organophosphorus poisoning patients required mechanical ventilator support in ICU as a primary tool in management & subsequently in the outcome of the patient.

**HD/CRRT required:**

Hemodialysis/CRRT was a requirement in most of the cases of aluminium phosphide poisoning, & it affected the prognosis vertically.
Average ICU stay (in established cases of poisoning):

It was maximum in organophosphorus poisoning, while it was least in kerosene ingestion, scorpion bite, bee sting, animal bite etc.

Toxicology cases survival:
Aluminum phosphide (Celphos):-
The poisoning has a very high mortality rate, yet a ray of hope is always there in darkness of cloud. This poisoning has a high mortality (40–100%) and survival is unlikely if more than 1.5 g is ingested. The lethal dose is 150–500 mg for an adult.

Targeting 100% survival in poisoning cases-

*Celphose:*
1. Very aggressive management of metabolic acidosis/massive bicarbonate therapy
2. Early institution of HD/CRRT/SLED
3. Ionotrops

*Organophosphorus poisoning:*
1. Apart from decontamination, supportive treatment.
2. Early PCT
3. Early mechanical ventilation
4. PAM in non carbamate poisoning

*Snake bite:*
1. ASV
2. Early identification and management of complication like
   - Intracranial hemorrhage
   - Coagulopathy
   - Muscle weakness
   - Necrosis

Conclusion:
Early identification with definitive care is the gold standard in management of poisoning. Early aggressive management with recognition of complications & their management remains the mainstay & has a significant prognostic value in the treatment of poisoning.

REFERENCES:
1. Adalkha et al., 1988; Jaiprakash et al., 2011; Jesslin et al., 2010; Vinay et al., 2008; Ramesha et al., 2009.