



OP11

A Comparative Analysis of Treatment Outcomes with N-Acetyl cysteine alone and N-Acetyl cysteine combined with Plasma Exchange in Acute Liver Failure Following Acute Yellow Phosphorus Poisoning- A Prospective Observational Study

**DR JAYAN JAYAPALAN NAIR, Dr Krishnadutt Chavali, Dr Vinay Pandit, Dr Chandan Dey,
Dr Vinay Rathore**

Department of Resident in Medical and Forensic Toxicology, AIIMS, Raipur, India

Aim and objectives:

- 1) To observe and compare the demographic variables of patients presenting with Acute Yellow Phosphorus poisoning.
- 2) To observe the lab parameters of Acute Yellow Phosphorus Poisoning cases
- 3) To compare the difference, if any, in laboratory parameters in Acute Yellow Phosphorus Poisoning cases treated with NAC alone and NAC combined with PLEX.
- 4) To observe and compare the outcome of treatment in both groups.

Methodology :

Study design: - Prospective observational study in AIIMS, Raipur, on all cases of Acute Yellow Phosphorus poisoning.

Materials and Methods:-

2 groups: - i) NAC group and II) NAC with PLEX group

Calculated sample size:- 18 patients in each group, so 36 patients in total. Data collection with consent form and questionnaire.

Results: (Interim data) This study to date has enrolled 10 patients, who were given NAC with PLEX therapy. The mean age of the population is 22 years. The ratio of male to female is 1.5:1.0. The mean total sessions of PLEX done is 3.8. The mean time taken to start PLEX is 4.9 days, since the ingestion of phosphorus.

Seven patients have survived out of the 10. Three patients had not recovered.

Mean values of AST decreased from 1180 to 289 after NAC+PLEX and INR from 3.39 to 1.71 after NAC+ PLEX. In survivors, AST decreased from a mean of 628 to 155 after NAC+PLEX and INR from 3.07 to 1.1 after



NAC+PLEX.

In non-survivors, AST decreased from 2470 to 604 after NAC+PLEX and INR from 4.1 to 3.1 after NAC+PLEX.

Conclusions: Plasma exchange combined with N- Acetylcysteine is life-saving in Acute Liver Failure due to Acute Yellow Phosphorus Poisoning. Even in a developing economy, this is an affordable treatment for whom liver transplants are the only option. Certain factors like the falling trend of AST and INR values may help in the prediction of success in these patients.