Abstract

Background: Aluminum phosphide, known in Iran as the "Rice Tablet", is used as one of the most dangerous pesticides for storing rice and other grains in warehouses and during transportation. In the last 35 years, many cases of high-mortality poisoning have been reported by contact with aluminum, zinc, and calcium phosphides. Severe drop in blood pressure and heart poisoning are the most serious complications of this poisoning, with a high mortality rate. **Aim:** Because the use of pesticides such as rice tablets has become commonplace in recent years and the number of people infected with the tablet has increased in medical centers, information on the effectiveness of peritoneal dialysis as a treatment for patients with rice tablet poisoning has been reported. We decided to study the effect of peritoneal dialysis in these patients.

Matherials and Methods: In this study, 27 cases of patients poisoned with aluminum phosphide were investigated. Information on age, sex, the amount of tablets taken, clinical signs and early tests such as vital signs, gastrointestinal, respiratory, neurological and final status of the poisoned were extracted from their files and processed by SPSS software. For each step, in addition to calculating the mean and standard deviation, the T-test was used to compare the means, and in all stages, the probability of error less than 5% is considered significant.

Results: In the study we performed, there was no significant difference between temperature and respiration rates during admission and clearance, and in PH, PCO_2, bicarbonate, open base, blood pressure and electrolytes (K^+, Na^+) There was a significant relationship between acceptance and discharge. Also, the frequency of male poisoning is higher than that of women and the highest frequency of poisoning is related to the age range of 21-30 years.

Conclusion: Peritoneal dialysis with improved acidosis and hypothetical elimination of toxins may lead to the restoration of various organ functions. There are few theories about how PD is effective in treating severe metabolic acidosis. PD can be used as the main treatment along with conservative and common treatments for aluminum phosphide poisoning in the treatment of severe metabolic acidosis.

Keywords: Peritoneal Dialysis, Poisoning, Phosphide Aluminum.