TREND OF SERUM LACTATE IN ALUMINUM-PHOSPHIDE POISONED PATIENTS

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Objectives: Aluminum phosphide (ALP) poisoning is common in Iran. Determination of the prognostic factors that can predict the patients' outcome is necessary for better management. We aimed to determine the trend of lactate in ALP-poisoned patients admitted to our toxicology ICU to see whether it could be used as a prognostic factor in these patients.

Methods: Patients who referred to our emergency department between March 2014 and March 2015 with the history of ALP ingestion and positive nitrate tests were prospectively entered into the study. Serum lactate levels were checked in 2-hour intervals until 24 hours post admission and compared between the survivors and non-survivors, afterwards.

Results: A total of 39 patients were evaluated. Of them, 27 (69.2%) were male and 15 (38%) died. Mean CO level, O2 saturation, pulse rate, and systolic and diastolic blood pressures were significantly different between those who died and those who survived. Mean hospital stay was 96 and 12 hours in survivors and non-survivors, respectively ($P<0.001$). Mean lactate level was significantly higher in the non-survivors showing that higher lactate levels could prognosticate a poorer outcome.

Conclusions: Serum lactate level is significantly higher in the ALP-poisoned patients who die. It, therefore, can be used as a prognostic factor in these patients. Nomograms to be designed to determine the toxicity severity and treatment of the ALP-poisoned patients such as that used in acetaminophen poisoning are encouraged.