



OP8

Value of APACHE II score Predicting Mortality After Acute Paraquat Poisoning

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BACKGROUND:

The incidence of Paraquat poisoning is increasing in India. It has a high mortality and doesn't have a specific antidote. Several scoring systems have been used to predict mortality among patients with Paraquat poisoning.

AIM AND OBJECTIVE:

The present retrospective cohort study aims to evaluate the Acute Physiology and Chronic Health Evaluation (APACHE) II scores in predicting the prognosis among patients with acute paraquat ingestion.

METHODOLOGY:

This retrospective study was conducted at the tertiary care institute in Chandigarh, India. The data was collected from the medical record department for ten years, starting from 2014 to 2023. An ICD-10 code of T60.3 was used to extract the data from the medical records. The demographic and clinical parameters, including the APACHE II score, were collected using the Epicollect5[®] application. We analysed data using the commercially available statistical software SPSS 22.0 (IBM SPSS, Inc.). We compared the differences between categorical and continuous variables using the chi-square and Mann–Whitney U tests, respectively. A P-value of less than 0.05 was considered significant.

RESULTS:

A total of 98 patients' data was extracted from the medical records. The mean age was 27.5 (25.1-29.9) years, with the majority of the patients belonging to rural areas [85/98 (86.7%)]. The mean consumption volume was [49.1 (34.6-63.6) ml]. There was an average delay of 5.4 days before the patient presented to the tertiary care centre. Oral ulcers were present in three-fourths of the patients. In-hospital mortality was 71.4%. APACHE II scores were higher in non-survivors (n=64, 10.47±4.02) than in survivors (n=24, 6.79±4.05) (P-value – <0.001). Apart from the APACHE II score, there was also a significant correlation between the requirement of oxygen



supplementation at admission, elevated alanine transaminases, serum creatinine levels, and arterial pH ($p < 0.05$ for all comparisons). Unlike studies in the past, there was no correlation between mortality and Paraquat compound volume of consumption (P-value – 0.07).

CONCLUSION:

This study has demonstrated that the APACHE II score is a good predictor of in-hospital mortality. Hence, it would serve as a good tool to prognosis patients for an emergency department physician.