



A CLINICAL PROFILE AND OUTCOME OF PARAQUAT POISONING

Dr. Gundu Akhileshwary*	Postgraduate Department of General Medicine Mamata medical college and Hospital Khammam, 507002, Telangana, India*Corresponding Author
Dr.S.V.Akhil	Postgraduate Department of General Medicine Mamata medical college and Hospital Khammam, 507002,
Dr. J.V.Ranadev	Senior Resident Department of General Medicine Mamata medical college and Hospital Khammam, 507002, Telangana, India

KEYWORDS :

INTRODUCTION

Paraquat is a quaternary nitrogen compound which generally used as a weedicide. It is highly toxic to humans. It causes oxidative damage in the lungs, kidneys, and liver.

AIM

To assess the clinical profile and outcomes of paraquat poisoning in a tertiary care center.

MATERIALS & METHODS

All patients who were admitted with Paraquat poisoning in medical wards and ICU from January 2021 to July 2022 at Mamata medical college Khammam are taken up for the study. An observational, cross-sectional study was done on 75 cases satisfying inclusion and exclusion criteria, the clinical course followed and outcome noted.

Inclusion Criteria:

- All patients who were admitted with Paraquat poisoning in medical wards and ICU are taken up for the study.

Exclusion Criteria:

- Patients who have taken paraquat along with other compounds.
- Chronic liver disease.
- Chronic kidney disease.
- The following details were assessed among the study population: Demographic details, Clinical history and examination, Routine blood investigations- including LFT and RFT, Ultrasound abdomen, Arterial blood gas analysis whenever required, A repeat of the above investigations if required.

Data analysis:

Mean and standard deviation for quantitative data, Frequency, proportions, and chi square test for qualitative data.

RESULT:

Among 75 cases, total male and female cases were 54(73%) and 21(27%) respectively. The median age for the study was 26 years. All poisonings occurred following suicidal ideation. Acute Kidney Injury was seen in 55 cases (73%). Toxic Hepatitis was seen in 38 cases (51%). Both AKI and Toxic Hepatitis were seen in 37 cases. Derangement of neither RFT nor LFT was seen in 19 cases. Respiratory failure was seen in 42 cases (56%). There were 26 patients with RFT, LFT, pulmonary derangements; only one such case has survived. Total number of deaths 58 cases (77.3%). Median hospital stay was 6 days.

DISCUSSION

Paraquat poisoning is highly toxic with a mortality of 77.3% in our study. There is an overwhelming majority of cases in rural settings, due to social factors. Similarly, more males are consuming paraquat than females. Individually, both Acute Kidney Injury and Toxic Hepatitis were not statistically significant factors for mortality. But presence of both AKI and Hepatitis in same patient was significant. Respiratory failure had strong association with mortality. Resultant mechanical ventilation resulted in 100% mortality. Significance of RF has correlated with many studies. Some cases may show early symptoms with improvement in AKI and Hepatitis, but ultimately death results from development of Alveolitis and Fibrosis. Despite supportive

hemodialysis, steroids and cyclophosphamide therapy, antibiotics it was ineffective in reducing the mortality rates. There is a longer hospital stay compared to other poisonings.

CONCLUSION

Paraquat is highly toxic despite active management. It lacks a specific antidote. Onset of respiratory failure heralds poor prognosis. It is banned in the European Union and China and is sparsely used in the US. Since most of the cases are from an agricultural background, and due to impulsive acts, banning of paraquat in India should be considered.

REFERENCES

- Harrison's textbook of internal medicine, 21st edition
- Rosen's textbook of emergency medicine, 14th edition.
- Jagadeesan et al, international journal of advances in medicine. 2017. Aug 4.
- Nagami et al, a hospital-based survey of pesticide poisoning. 1998-2002. Intl J Occup Environ Health.
- Li LR., Sydenham E., Chaudhary B., You C. 2010. Glucocorticoid with cyclophosphamide for paraquat-induced lung fibrosis. Cochrane Database Syst Rev, CD008084.