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## Clinical Profile and Outcomes of Paraquat Poisoning: A Retrospective Study in a South Indian Tertiary Centre.

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Aim and objectives: This study aimed to elucidate the clinical characteristics, management strategies, and outcomes of paraquat poisoning cases in a tertiary center in South India, within the timeframe of January 2022 to December 2022.

Methodology: A retrospective analysis of paraquat poisoning cases was conducted, utilizing medical records from the specified duration. Demographic information, clinical presentations, interventions, and outcomes were extracted and analyzed.

Results: Among the 19 patients included in the study, 12 (63.2%) were male. Notably, hypotension was observed in only 1 patient (5.3%). Intriguingly, 7 patients (36.8%) developed hypoxia leading to subsequent lung injury. The predominant presenting symptom was vomiting, reported in 13 patients (68.4%). Remarkably, all patients confirmed paraquat consumption, constituting 24% of cases. Gastric lavage was administered in 18 patients (94.7%), while acute kidney injury (AKI) was evident in 14 cases (73.7%). Activated charcoal was utilized for 7 patients (36.8%), and steroids were prescribed to 10 patients (52.6%).

In terms of outcomes, the mortality rate stood at 52.6%, with 10 out of 19 patients succumbing to paraquat poisoning. Two patients out of total subjects received charcoal hemoperfusion, both of whom were successfully discharged. Notably, 77% of discharged patients presented for medical attention within 24 hours of ingestion, emphasizing the need for swift intervention. Among the discharged patients, 66% required hospitalization for 7 days or more. Tragically, all 7 patients with lung injuries experienced fatal outcomes. Strikingly, 88.9% of patients (n=8) who ingested more than 20 ml of paraquat did not survive. Post-mortem analysis was available for 8 patients, revealing petechial lung hemorrhages in 62% (n=5) of cases.

Conclusions: This retrospective study provides valuable insights into the clinical profile and outcomes of paraquat poisoning in a South Indian tertiary center. The study highlights the severity of paraquat poisoning, reflected in the high mortality rate and the association between lung injury and fatal outcomes. The potential benefits of interventions such as charcoal hemoperfusion and the importance of early medical attention for discharged patients underscore the need for tailored management strategies. The presence of petechial lung hemorrhages in post-mortem analyses further deepens our understanding of the pathological consequences of paraquat poisoning. Efforts to enhance awareness, early intervention, and targeted treatments are imperative to mitigate the impact of this toxic exposure.