Poster Abstracts

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CLINICAL CHARACTERISTICS OF DERMAL PARAQUAT EXPOSURE

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Objectives: To retrospectively analyze clinical characteristics and factors related deaths from skin exposure to paraquat.

Methods: We performed a retrospective cohort study from Ramathibodi Toxic Exposure Surveillance System during 2008-2015. The diagnosis of dermal paraquat exposure was from the patients' history and the final diagnosis of our data.

Results: There were totally 133 patients who had dermal paraquat exposure. They were consulted from the hospitals in all regions of Thailand. The systemic toxicity occurred in 30.82% of our patients and the mortality rate was 16.54%. All deaths were men. The patients developed skin for 91.6%, acute kidney injury for 30.77%, liver injury for 17% and dyspnea symptom for 18.80% of all. We performed the subgroup analysis between the dead and survived groups. The average age was statistically significant higher in dead (49.27 + 12.58) than the survivors (37.57 + 16.05), especially in patients who were more than 60 years old (odds ratio (OR): 6.87, 95% confidence interval (CI): 1.17-40.27).The clinical factors associated deaths were the underlying skin diseases (OR, 5.94; 95% CI, 1.36-25.93; p-value 0.018), the numbers of contaminated area > 1 area (OR, 2.72; 95% CI, 1.07-6.94; p-value 0.035), the heart rate in hospitalization > 100 beats/minute (OR, 9.07; 95% CI, 1.76-46.62; p-value 0.008), dyspnea symptom at presentation (OR, 25.43; 95% CI, 4.82-133.97 p-value <0.001), in-hospital gastrointestinal symptoms (OR, 15.88; 95% CI, 2.85-88.49; p-value 0.002), in-hospital jaundice (OR, 8.53; 95% CI, 1.34-54.47; p-value 0.024) and in-hospital neurological symptoms (OR, 9.94; 95% CI, 2.53-39.11; p-value 0.001).
The laboratory associated deaths were dysnatremia (OR, 10.02; 95% CI, 2.61-38.55; p-value 0.001), dyskalemia (OR, 6.51; 95% CI, 1.86-22.80; p-value 0.003), metabolic acidosis (serum bicarbonate < 20 mmol/l) (OR, 7.07; 95% CI, 1.88-26.54; p-value 0.004), acute kidney injury (AKI) (p-value <0.001), liver injury (p-value < 0.001), day of peak BUN (p-value 0.003), peak BUN (p-value < 0.001), day of peak creatinine (p-value 0.006) and peak creatinine (p-value < 0.001).

Conclusion: Dermal paraquat exposure caused both local and systemic effect. The mortality rate and damage to multiorgan systems were not less. The underlying skin lesions, tachycardia during hospitalization, some in-hospital clinical symptoms, the abnormal electrolyte values were independently associated with deaths. AKI and liver injury might be the prognostic factors.