Poster Abstracts

PO-05

A PREDICTION OF CLINICAL OUTCOME FROM INITIAL URINE DITHIONITE TEST IN THE PATIENT WITH PARAQUAT POISONING

Aimon Pradoo[1], Sahaphume Srisuma[1], Satariya *Trakulsrichai*[1,2], *Winai Wananukul*[1]

[1] *Ramathibodi Poison Center, Ramathibodi Hospital, Faculty of Medicine, Mahidol University, Bangkok, Thailand,* [2] *Department of Emergency Medicine, Ramathibodi Hospital, Faculty of Medicine, Mahidol University, Bangkok, Thailand*

Objectives: To determine association between urine dithionite test results and test time with death and systemic involvement in acute paraquat poisoning patients.

Methods: This is a retrospective study of acute paraquat exposure patients with presence of urine dithionite test results reported to Ramathibodi Poison Center during June, 2015 and May, 2016. The urine sample was collected from the patients on arrival at the hospital. A test time of urine dithionite was divided into 2 groups: within 12 hours and later than 12 hours after exposure. A result of urine test was reported as a negative result when the urine color did not change from the control. The positive results were graded by color; group 1 for green or light blue color, group 2 for dark blue color and group 3 for purple or black color. Urine dithionite test results and test time were analyzed for association with death and systemic involvement.

Results: During the study period, there were 64 acute paraquat exposures with urine dithionite test results. Forty-six patients (71.8%) had urine dithionite tests done within 12 hours. Eighteen patients (28.1%) were tested later than 12 hours. Thirty seven patients (57.8%) had a positive result.

There were 15 deaths (23.4%), all had positive urine dithionite test. There were 9 deaths in 46 cases tested within 12 hours, all had purple or black urine color. In 18 cases tested later than 12 hours, there were 6 deaths (2 with green or light blue urine color, and 4 with dark blue urine color).

There were 15 cases with purple or black color results, all were tested within 12 hours. In these 15 cases, 6 cases survived (1 with major outcome, 3 with moderate outcome, and 2 with minor outcome).

In univariate analysis, initial urine color of dithionite test was associated with death (P<0.01) and systemic involvement (P<0.01). In multiple logistic regression analysis, both urine color and test time later than 12 hours were associated with death and systemic involvement. From our analysis, we derived a risk assessment chart to approximate mortality risk and risk of systemic involvement based on urine color result and testing time.

Conclusion: From multiple logistic regression analysis, initial urine dithionite test results and test time may predict death and systemic involvement in patients with acute paraquat exposure.