PROGNOSTIC EVALUATION OF METHEMOGLOBINE LEVEL BY PULSE CO-OXIMETERY IN ALUMINUM PHOSPHIDE POISONING

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Objective: There are different studies reporting methemoglobinemia (Met-Hb) in ALP poisoning. These few studies revealed an association between Met-Hb level and mortality. This study was done to evaluate Met-Hb level by pulse CO-Oximeter (Sp-Met) in patients with suspected ALP-ingestion and to determine an association between Met-Hb level and mortality, if any.

Methods: In this cross-sectional cohort study all patients presenting to the ED between March-December 2012 who reportedly ingested "rice tablet" were enrolled prospectively. Data collected included demographics, mean Sp-Met, blood pressure and blood gas analysis over time, until death or discharge. The ill-health group was defined as those who had SBP ≤ 80 mmHg or pH ≤ 7.2 or HCO3 ≤ 15. Sp-Met level of unaffected and ill-health group were compared in different hour intervals post ingestion.

Results: All 95 patients were referred between 30 minutes and 24 hours post-ingestion. Of these, 37(38.9%) died and 27(28.4%) fulfilled ill-health criteria.

A Sp-Met equal/higher than 3.76% for mean 0.5-6 hrs post-ingestion has a sensitivity of 100% in fulfilling ill-health criteria. For mean 7-12 hrs and 13-24 hrs post-ingestion it was 2.50% and 1.53% respectively. Irrespective of post-ingestion time, all cases with Sp-Met more than 3.30%, died.

Conclusion: Sp-Met is a sensitive method to predict life-threatening ALP exposures