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Mometasone furoate nasal spray causing suppression of HPA axis

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Diabetic Ketoacidosis (DKA) is a potentially fatal metabolic complication of diabetes mellitus. Although the average length of stay in the hospital with DKA as the first-listed diagnosis decreased from 5.7 to 3.4 days from 1988 to 2009, it is still responsible for about half a million hospital days per year and an estimated annual direct and indirect cost of 2.4 billion USD. PLR (platelet lymphocyte ratio) and NLR (neutrophil lymphocyte ratio) are recently established markers of inflammation and were introduced in prognosis of hematological, cardiac and neurological diseases. Our study aimed to look at known predictors and test NLR and PLR as new predictors of DKA length of stay in both ICU and hospital. We reviewed the medical records of 475 patients admitted to ICU with primary diagnosis of DKA from 2008 to 2016. Data collection included demographics and parameters of the 24 first hours of diagnosis and admission to ICU; first complete blood count with differential, comprehensive metabolic panel, serum ketones, urine ketones, glucose, HbA1C. We calculated the APACHEII score, PLR and NLR. We also collected the ICU and hospital length of stay. 243 patients had arterial blood gas available, 90 patients didn't meet the criteria for DKA by the ADA definition (pH<7.3, bicarbonate<18), while 153 patients met these criteria. For the 153 patients, the mean age was 45, 53.59% were men, 46.41% were women. 18.42% were black, 65.13% were white. 65.36% had diabetes mellitus type 1, while 29.41% had diabetes mellitus type 2. DKA was secondary to non-compliance in 42.48%, new onset diabetes in 30.42% and sepsis/infection in 18.95% of cases. 2.43% of patients died. The mean NLR was 9.8, mean PLR was 254.5, mean APACHE2 was 24.8 and mean albumin was 3.9. Mean length of stay (LOS) was 2.19 days in ICU and 4.89 days in hospital. Regarding correlations of NLR, PLR, APACHE2 and Albumin with LOS: Higher NLR was positively correlated (r=0.15185) with ICU LOS although insignificant p value (p=0.0610), however, it was significantly correlated with hospital LOS (p=0.0101). Higher PLR was positively but insignificantly correlated with both hospital (r=0.04194) and ICU LOS (r=0.10936). Higher APACHE II Score was significantly and positively correlated with increased hospital LOS (p=0.0110) but not with ICU LOS. Both NLR and PLR were significantly correlated with APACHE2 score. Finally, lower albumin levels predicted longer LOS in both hospital (p<.0001) and ICU (p=0.0232). Our study introduced a new marker for predicting hospital LOS which is NLR, a much easier predictor to use compared to APACHE2 score, while PLR was positively correlated with LOS without showing statistical significance. Our study also showed that albumin by itself is a predictor of ICU and hospital length of stay likely related to underlying comorbidities of patients. A bigger sample of patients might be needed to verify these associations and possibly show others that weren't detected in this study.

Biography

Rania El Mais is presently serving as a Resident Physician at Staten Island University Hospital, New York

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