

In the hospital setting, some nondiabetic patients develop hyperglycemia and subsequently require long-term insulin while receiving PN” Varayil et al (2015).

Abstract:

Background: Parenteral nutrition (PN) is a life-sustaining therapy in appropriate clinical settings. In the hospital setting, some nondiabetic patients develop hyperglycemia and subsequently require long-term insulin while receiving PN. Whether similar hyperglycemia is seen in the outpatient setting is unclear.

Methods: We studied patients enrolled in the Mayo Clinic Home Parenteral Nutrition (HPN) program between January 1, 2010, and December 31, 2012. Patients were excluded if they had diabetes mellitus type 2 (DM2), had previously received HPN, had taken corticosteroids, or were at risk for refeeding syndrome.

Results: Of 144 enrolled patients, 93 met inclusion criteria with 39 patients requiring the addition of insulin to HPN. The mean age of the insulin-requiring group (IR) was higher than that of the non-insulin-requiring group (NIR) (60.74 ± 13.62 years vs 48.97 ± 17.62 years, $P < .001$). There were 17 (44%) men in the IR group and 26 (48%) men in the NIR group. Mean blood glucose at baseline before starting the infusion was 131.82 ± 49.55 mg/dL in IR patients and 106.16 ± 59.01 mg/dL in NIR patients ($P = .03$). In the stepwise multivariate analysis for assessing the risk for developing hyperglycemia, HR for age was 1.020 (1.010–1.031), $P < .001$.

Conclusions: Hyperglycemia is a common finding with the use of PN in both the hospital and ambulatory setting in patients without a previous diagnosis of DM2. Age was the most significant predictor of the requirement of insulin in the present study. When hyperglycemia is managed appropriately with insulin therapy, the long-term complications can be minimized.

Reference:

Varayil, J.E., Yadav, S., Miles, J.M., Okano, A., Kelly, D.G., Hurt, R.T. and Mundi, M.S. (2015) Hyperglycemia During Home Parenteral Nutrition Administration in Patients Without Diabetes. JPEN. September 21st .

Thank you to our partners for supporting IVTEAM