Abstract:

Background: The European Society for Clinical Nutrition and Metabolism Guidelines for Parenteral Nutrition in Geriatric Patients state metabolic complications are more frequent in elderly patients. However, literature provides limited information about metabolic complications in older patients receiving parenteral nutrition (PN). Consequently, the purpose of this study was to compare the development of metabolic complications in older vs younger patients receiving PN.

Methods: Patients receiving PN from May 1, 2014, to February 7, 2017, at Cooper University Hospital were included. Metabolic complications assessed included acid-base disturbances, hepatic complications, hypercapnia, hyperchloremia, hyperglycemia, hypernatremia, hypertriglyceridemia, hypochloremia, hypoglycemia, hypokalemia, hypophosphatemia, and refeeding syndrome.

Results: 595 patients were included (older group [≥65 years]: n = 245, median age: 76 years; younger group [<65 years]: n = 350, median age: 53 years]. Certain characteristics were similar between groups (female, 51%; mean body mass index of 28; critically ill, 34%; central PN, 97%; median duration of PN, 7 days; mean energy provision PN, 25.4 kcal/kg/d; mean dextrose infusion rate, 2.31 mg/kg/min). Overall, metabolic complications developed in 58% of patients and occurred more frequently in older vs younger patients (65.7% vs 53.4%; P = .003). Multivariate logistic analysis demonstrated increased odds of metabolic complications in the older group (odds ratio, 1.55; 95% CI, 1.014-2.375).

Conclusions: Older hospitalized patients are more likely to develop a metabolic complication during their PN course than younger patients. This study heightens awareness that patients of advanced age are subject to metabolic complications; practitioners should anticipate and resolve complications in a timely manner.

Reference: