Zinc Supplementation Does Not Affect Glucagon Response to Intravenous Glucose and Insulin Infusion in Patients with Well-Controlled Type 2 Diabetes

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 Glucagon dysregulation is an essential component in the pathophysiology of type 2 diabetes. Studies in vitro and in animal models have shown that zinc co-secreted with insulin suppresses glucagon secretion. Zinc supplementation improves blood glucose control in patients with type 2 diabetes, although there is little information about how zinc supplementation may affect glucagon secretion. The objective of this study was to evaluate the effect of 1-year zinc supplementation on fasting plasma glucagon concentration and in response to intravenous glucose and insulin infusion in patients with type 2 diabetes. A cross-sectional study was performed after 1-year of intervention with 30 mg/day zinc supplementation or a placebo on 28 patients with type 2 diabetes. Demographic, anthropometric, and biochemical parameters were determined. Fasting plasma glucagon and in response to intravenous glucose and insulin infusion were e