

Abstract

It is well known that patients with diabetes mellitus (DM) have increased risk of postoperative complications. The postoperative period itself can lead to challenges with glycemic management. In renal transplant patients, glycemic control is highly labile due to changes in physiology of glucose and insulin regulation, with the additional challenge of high-dose steroids for prevention of organ rejection. This study aims to characterize the renal transplant population as well as glycemic management of the renal transplant population at the University of Colorado Hospital. This will provide a foundation with which to compare future studies using continuous glucose monitoring with the goal of providing better glycemic control and preventing postoperative complications including the development of post-transplant diabetes mellitus (PTDM). We hypothesized that good glycemic control in the immediate peri-transplant period is associated with lower risk of organ rejection, readmission, and infection. Results of the study show that patients with a past medical history of diabetes mellitus have a trend toward increased incidence of hospital acquired infection, Intensive Care Unit (ICU) admission, need for dialysis during hospitalization, 30-day readmission, and death within 30 days. Length of hospital stay was also slightly increased with an average stay of 4.5 days compared to 4.0 days in patients without a history of DM. Patients experiencing hyperglycemia during hospitalization had a higher percentage of patients with hospital acquired infection and readmission within 30 days. Future research should evaluate insulin management strategies in the postoperative period to reduce rates of hyperglycemia in both patients with and without diagnosis of diabetes.