

KCHP Poster Abstract

Title

Early Administration of Subcutaneous Basal Insulin for Acute Management of Diabetic Ketoacidosis

Objective

To assess for appropriate diabetic ketoacidosis management in hospitalized, diabetic patients

Purpose

Diabetic ketoacidosis (DKA) is a serious, life-threatening complication of diabetes mellitus that affects approximately 30 million people in the United States each year. It is characterized by hyperglycemia, metabolic acidosis, dehydration, and electrolyte imbalances. Continuous intravenous insulin is the current standard of care for acute management of DKA. Once DKA has resolved, patients are transitioned back to subcutaneous insulin therapy. Studies have shown that early initiation of basal insulin is associated with a faster resolution of DKA, shorter duration of continuous infusion insulin, and shorter length of hospital stay. Currently at our institution, early initiation of basal insulin is under-utilized for acute management of DKA. A medical use evaluation of the efficacy and safety of early initiation of basal insulin, in addition to continuous intravenous insulin, for acute DKA management is needed.

Methods

A report, generated from the electronic medical record, identified patients admitted for DKA (ICD10 code: E11.10 and E10.10) between May 2020 through November 2020, for retrospective, single-center analysis. Patients will be excluded from analysis if they are < 18 years old, pregnant, prisoner, treated with systemic steroids, in end-stage renal disease, transferred from an outside hospital, left against medical advice, or discharged to hospice. The primary outcome of this study is the time to anion gap closure. The secondary outcomes include rate of DKA relapse, duration of intravenous (IV) insulin drip, mean total IV insulin dose, mean total IV fluid requirements, rate of intensive care unit (ICU) admission, length of ICU stay, and length of hospital stay. This medical use evaluation was approved by the institutional Pharmacy and Therapeutics Committee on December 1st, 2020.

Results

Research in progress

Conclusion

Research in progress