

DKA and HHS definitions

DKA and euglycemic diabetic ketoacidosis (EDKA)

- Hyperglycemia
 - Glucose cutoff >200 mg/dl for all patients
 - No glucose cutoff value at all for patients with DM
 - This is because of the recognition of the EDKA in patient taking sodium-glucose cotransporter-2 (SGLT2) such as Canagliflozin
- Metabolic acidosis
 - pH <7.3 and HCO₃ <18
 - The anion gap has been removed
- Ketonemia
 - Beta hydroxybutyrate >3

DKA and EDKA management is similar, although early glucose administration may be required in EDKA to facilitate adequate insulin delivery and ketone clearance

HHS

- Hyperglycemia
 - Glucose cutoff >600 remains
- Hyperosmolality
 - Serum osmolality >300 rather than 320

Hypoglycemia in the ICU

Non-insulin-mediated hypoglycemia (hypoinsulinemic hypoglycemia)

- Low insulin and C-peptide levels
 - Acute causes of non-insulin-mediated hypoglycemia in adults
 - Liver failure
 - Kidney failure
 - Adrenal crisis
 - Sepsis

Insulin mediated hypoglycemia (hyperinsulinemic hypoglycemia)

- The C-peptide level can be used to differentiate an endogenous insulin production from exogenous insulin use
 - Exogenous insulin
 - High insulin and normal C-peptide levels
 - Endogenous insulin production
 - High insulin and C-peptide levels
 - Acquired causes of endogenous insulin production
 - Insulin secreting Tumor
 - Insulin autoimmune syndrome
 - Overproduction of endogenous insulin paralogues, such as IGF-I and IGF-II
 - Excess production of insulin-like growth factor