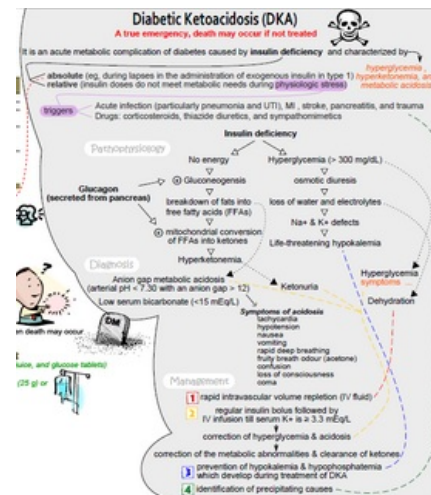


Ketoacidosis (FBLT)

Ketoacidosis is a condition in which **plasma concentrations of ketone bodies** increase, and because they are relatively strong acids, their increase leads to the development of acidemia (decrease in blood pH). This condition can be **life-threatening**. Diabetic ketoacidosis (DKA) is caused by a lack of insulin. Mild ketoacidosis contributes to a decrease in pH during starvation. Other conditions associated with ketoacidosis include:

1. Alcoholic ketoacidosis
2. Pregnancy ketosis
3. Poisons: isopropyl alcohol, salicylates
4. Congenital metabolic defects

Ketoacidosis:



Diabetic ketoacidosis (concept map)

Diabetic ketoacidosis (DKA)

The pathophysiological basis of diabetic ketoacidosis is insulin deficiency and relative excess of counterregulatory hormones. This results in excessive lipolysis in adipose tissue, which leads to an increase in plasma fatty acid concentrations. The concentration of malonyl-CoA in hepatocytes decreases, which disinhibits the transport of acyl-CoA into the mitochondria - the process of β -oxidation begins. HMG-CoA synthase is activated and the respiratory chain is saturated with reduced cofactors from fatty acid oxidation - the Krebs cycle slows down. Simultaneously, the production and utilization of ketone bodies increases, ketone bodies are excreted in the urine - ketonuria. Utilization of ketone bodies reaches a maximum at a concentration of ~ 12 mmol/L, but they further accumulate and deepen acidemia. We can smell the sweet smell of acetone in the breath of these people.

Links

Related articles

- Ketones
- Ketone bodies in urine / determination
- Insulin

External links

- Ketoacidosis (<https://cs.medlicker.com/372-diabeticka-ketoacidoza-priciny-priznaky-diagnostika-a-lecba%7C>)