

Disorders of carbohydrate metabolism

Often * increased or decreased glucose in blood,

* increase or decrease of glycogen in tissues with glycogen or

* glycogen accumulation in tissues without glycogen.

These disorders are caused by lack of enzymes and hormones necessary for glycogen metabolism, incomplete or malfunctioning.

Disorders of carbohydrate metabolism

Hypoglisemi

Decreased blood glucose

- * Iatrogen insulin administration,
- * Neoplastic events such as insulinoma (beta-cell tumor of the pancreas)
- * Liver failure inhibition of gluconeogenesis by the action of insulin antagonists

It is shaped by over-released insulin. Glucose is the most affected by the brain and convulsions occur.

Hyperglisemi

Increased blood glucose.

Resorbed glycemia after ingestion of food.

With the involvement of the stratum nervous and hormones (such as adrenaline), a transient hyperglycaemia can occur.

Continuous hyperglymy Hyperglise Kanda is an increase in glucose.

Resorbed glycemia after ingestion of food.

With the involvement of the stratum nervous and hormones (such as adrenaline), a transient hyperglycaemia can occur.

Glycogen Accumulation

Other disorders related to glycogen metabolism

Glycogen is collected in some organs such as the liver and kidneys.

In the histopathological examination, the very large round vacuoles of the cytoplasm of the hepatocytes that make up the structures of the lobules disappear.

Glycogen dyes indicate that these gaps contain glycogen. Electron microscopic examination, glycogenin, endoplasmic reticulum, collected in autophagosomes.

Glycogen Accumulation

In some types of tumor cells such as chondromas

In humans, glycogen is accumulated in the stroma cells of the uterine mucosa with the increase of uterine secretion physiologically during pregnancy period. These types of cells are called decidua cells.

In some intoxications, enterotoxemia (*C.l.perfringens* infection) in sheep hyperglycemia and glycosuria.

This is related to the excessive degradation of the glycogen in the liver (glycogenolysis). The epsilon toxin of the enterotoxemic agent leads to severe endothelial destruction, deterioration of the vessels, decrease of hepatocyte-to-vessel exchange, decrease of oxygen, and rapid degradation of the glycoside resulting from lysosomal response to anaerobiosis.

Glycogen Detection in Tissue

To display glycogen in tissues directly, either the tissues are detected in fixative solutions that do not contain water, or they are frozen by freezing with a freezing microtome (cryostat) without detection

It is painted with special staining methods that dyes glycogen. It is the simplest alcohol fixation from anhydrous fixation solutions.

The tissues are detected in absolute (pure, 100) or at least 70% alcohol.

It has also been reported that it can be detected in dextrose-saturated formalin solution.

Glycogen in the tissue is detected with special stains. One of them is the best glass dyed. The cytoplasm of the cell is partially stained with glycogen, **carmin** in the nucleus, or red color in the clustered state.

In addition, **PAS (periodic acid Schiif) stain** and stain are also used.