Disorders of Lipid Methabolisma

Fat accumulation in various parts of the body includes various morphological changes with reduced fat touch. These changes are:

Increase or decrease in fat tissue in the body,

Lipid accumulation in areas where lipid is not visible

Except lipid cells, non-visible lipid becomes visible. In this case, other degenerative changes occur in the cells.

Increase or decrease of complex lipids other than neutral lipids
Normal lipid lowering or exiting

Enzymatic disorders

Necrosis in fatty tissue

Decrease and increase of fat in fatty tissues
Obesitaz
Adipostaz
Cachexia and ketonemia

Increase and decrease of blood lipids hyperlipidemia
(alimenter lipemia, primary hyperlipemia, transport hyperlipemia)

Fat changes outside the fatty tissues
Lipomatosis (oil infiltration)
Extracellular fat accumulation (accumulation)
Lipophagic cells

Hereditary enzymopathies
Lipidosis

Cholesterol metabolism disorder

Necrosis in fat
Steatonecrosis (enzymatic fatty tissue necrosis)
Fat tissue necrozu

Fatty degeneration

Adipositase, Obesitase

Obesitas : Excess eating means obesity.

The energy provided by fatty, carbohydrate foods is stored as a neutral oil in the fat deposits.

The result is an increase in weight and volume in the whole body; it comes to fatness.

Adipositas :It means lubrication.

It is used instead of obesity again. However, in this case, it is understood that neutral fat is collected in the fat deposits in certain regions of the body.

For example, depending on the sex, men in the umbilicus; As women accumulate fat in the fat deposits in the upper parts of the hips, arms and legs, the volume of these parts increases.

Etiology

1. Exogenous

a. Overdose of fatty foods

b. Taking more carbohydrate foods than necessary and turning them into fat

c. Decreased activity, low energy consumption. Especially in domestic cats and dogs; in the stall in the barn

2. Endogenous

a. Endocrine disorders, causes that reduce metabolism, genetic tendency etc. Hyperplasia of the pituitary anterior lobe and adrenocorticotropic hormone ACTH is secreted in the basophil cell adenoma. This adrenal cortex acts and releases glucocorticoids (cortisol). As a result, both the appetite increases (hyperphagie) and the effect of cortisol, fat cells accumulate more fat.

b. Neoplasia or hyperplasia located directly in the adrenal cortex

c. Hypoplasia, atrophy in gonads; Castration is defined as "dystrophia adiposa genitalis", which is related to the ovulation of the anterior pituitary gonad, with the exception of the tumor.

D. Thyroid hormones in fat metabolism; in particular in the synthesis of cholesterol, in the metabolism of fat in the liver (thyroxine lipoprotein lipase, indirectly activates epinephrine, glucagon). In hyperthyroidism, fat is not metabolized enough, calcareol is increased. Arteries accumulate to develop atheroma and arteriosclerosis. Lubrication occurs in the body.

e. Decreased metabolism in old age

f. Genetics may be prone to fatigue. For example, "picnic types" in humans.

g. In hyperinsulinism, the energy is always the carbon hydrattan, so the fat is not burned. In hypoinsulinism, however, the carbohydrate metabolism slows down and energy is supplied from the oil and lipolysis occurs

h. When cortisone is given with the purpose of treatment, lubrication increases.

Lipomatozis

Especially in extreme obesity. It is characterized by the fact that the parenchyma organs of non-neoplastic fat cells (lipocytes) infiltrate interstitium.

It forms in the tissue parts near the fat deposits. For example lipomatosis cordis is formed by the interstitium infiltration between the fatty tissue cells around the heart ; around the pancreas. Similarly, fat tissue cells under the skin can pass between the muscles.

Fat cells (lipocytes) infiltrate interstitium (mesenchymal tissue, connective tissue) especially in the tissue spaces of parenchymatous organs in their environment.

Extracellular Lipid Accumulation

It is characterized by the presence of lipids (fat cells) but not directly in the fat cells.

Lysis of cells containing liposomes or other fat; the oil contained in these cells comes out and collects.

For example, phospholipids and triglycerides accumulate in the tissue spaces in this way. The fat in this case is phagocytosed by the macrophages in the region.

In the same way as Collesterin; but are either incorporated into lipoprotein-bound or crystalline interstitial sites. When collected as crystals, cracks that break the light are seen to be cracked, which is called "collesterine clefts"

Steatonecrose

Steatonecrose

Fat is the enzymatic destruction of the touch. In the abdominal cavity, the pancreas occurs especially in the omentum in the intraabdominal fat pouch.

Pathogenesis

Acute hemorrhagic pancreatitis occurs in pancreatic diseases such as pancreatic necrosis by cleaving neutral oils (triglycerides) around the released lipase.

The liberated glycerol is removed from the medium; and fatty acids are combined with alkalis such as magnesium and calcium to form salts and saponify.

Other enzymes, such as amylase, lecithin, are also involved.

Steatonecrose

Macroscopical Findings

The foci at the beginning of the oil necrosis are yellowish stains at the beginning. Especially the omentum and the fatty tissue around the pancreas. Circumstances are hyperemic, 0.5-2 cm in diameter, matt chalky white stains or streaks in the nodules.

Microscopical Findings

The necrose is breathing fat cells. Some of it has melted and shattered. The inside of the partially intact ones is empty; only the cell membrane is selected. In these areas, calcium deposits are seen. There are hyperemia, leukocyte infiltration around her.

Disorders of Cholesterin Methabolisma

Although not important in animals, it is important to cause arteriosclerosis in humans.
Cholesterol impairment is general and local.

The generalized hypercholesterinemie form is inherited. It does not matter in animals Cholesterin is the excess of cholesterol, cholesterol also accumulates in organs.

In this context, colles are found in the walls of the arteries, in the interstitial tissue and in the Kupffer cells in the liver. The accumulation of cholesterin in the intima of the artery forms the plaques called atheromas. They are soft in the beginning with a yellowish color. Reactional connective tissue develops; then collagen filaments are formed, which is referred to as arteriosclerosis.

In addition, in the vascular media and intima, in the tissues, the collet is crystallized and forms xanthom (xanthomas).

Lipidose (Lipidosis)

Genetic enzymes are characterized by the accumulation of fat and fat metabolites in the cell phagosomes

It is mostly in the nervous system; partly in the mononuclear phagocytosis system (MPS), skeletal muscle, skin and liver cells.

Fatty Degeneration

Fatty degeneration is the accumulation of neutral lipids in the cytoplasma.

Except for physiological fat, the fat in the cells is invisible by binding to other substances such as protein.

This is called "masked fat".

When the masked fat in the cell becomes visible, it is called "fat fenose" (phaneros = visible).

In such cases, both unexplained fat appear as fat deposits and other morphological changes occur in the cell. This condition, defined as fatty degeneration, is defined macroscopically and microscopically in organs and tissues.

Etiology

It is most common in the liver. Its main cause is:

Excess fat coming from the intestines
Excess fatty acids coming from fat deposits
Degradation of fat metabolism
Degradation of fat transport from the liver

Fatty Degeneration

Etiology

The most important cause is hypoxia and toxication

The main reasons for hypoxia :

Lack of oxygen due to anemia

Carbonmonoxide poisoning

V. Blockage of central blood flow

In cases like passive hyperemia related to heart failure, the respiratory enzymes in the liver cells deteriorate and fatty degeneration is formed.

In such cases, centrolobuler liver fat is seen. Then it becomes a panlobular

Necrosis is formed by the progress of the event. Especially those connected to chronic heart failure go as far as cirrhosis.