Journal of Interdisciplinary Histopathology, 2022
VOL 10, NO. 2, PAGE 01

COMMENTARY

Open Access

Prevalence of Hepatic Steatosis

Abbas Ghazi*
Department of Histology, University of Rojava, Qamishli, Syria

ARTICLE HISTORY
Received: 01-Feb-2022, Manuscript No. EJMJIH-22-53776;
Editor assigned: 03-Feb-2022, PreQC No. EJMJIH-22-53776 (PQ);
Reviewed: 17-Feb-2022, QC No. EJMJIH-22-53776;
Revised: 22-Feb-2022, Manuscript No. EJMJIH-22-53776(R);
Published: 01-Mar-2022.

Description

Fatty liver, also called a change in fat, is an abnormal storage of fat (lipid) in cells or organs. Fat disease most commonly affects the liver, the major organ of fat metabolism. This condition is commonly known as fatty liver disease. Fatosis can also occur in other organs such as the kidneys, heart, and muscles. If the term is not further specified (such as "cardiac lipopathy"), it is considered to refer to the liver.

Fatty liver disease (fatty disease) is a common condition caused by too much fat in the liver. A healthy liver contains a small amount of fat. It becomes a problem when fat reaches 5% to 10% of the weight of the liver. Risk factors associated with steatosis are varied, and may include diabetes mellitus, protein malnutrition, hypertension, cell toxins, obesity, anoxia, and sleep apnea.

Lipopathy reflects a disorder of the normal process of triglyceride fat synthesis and removal. Excess lipids accumulate in the vesicles that move the cytoplasm. If the vesicles are large enough to distort the nucleus, the condition is called macrovesicular lipopathy. Otherwise, the condition is called microvesicular steatosis. In mild cases, they are not particularly harmful to cells, but large amounts of accumulation can destroy cellular components, and in severe cases, cells can even rupture.

Macrovesicular steatosis

Macrovesicular steatosis is a more common form of obesity and can be caused by obesity, Obstructive Sleep Apnea (OSA), insulin resistance, or lipid overload due to alcoholism. Nutrient deficiency can also cause fat mobilization from adipocytes, causing a local oversupply of the liver where lipid metabolism occurs. Excessive alcohol over a long period of time can lead to obesity. The decomposition of large amounts of ethanol in alcoholic beverages produces large amounts of chemical energy in the form of NADH. It signals cells to suppress fatty acid breakdown (and energy production) while increasing fatty acid synthesis.

Microvesicular steatosis

Microvesicular steatosis is characterized by small intracytoplasmic fat vacuoles (liposomes) which accumulate within hepatocytes. Common causes are tetracyclines, acute fatty liver of pregnancy, Reye's syndrome and hepatitis C.

In X-ray Computed Tomography (CT), increasing fat content reduces the density of liver tissue and reduces the brightness of the image. Usually, the spleen and liver have about the same density. In steatosis, there is a difference in the density and brightness of the two organs, which makes the liver look dark. With ultrasound, fat is more echogenic (it can reflect sound waves). The combination of dark hepatic steatosis on CT and bright hepatic steatosis on ultrasound is sometimes called a flip-flop sign.

Magnetic resonance imaging can use a multi-echo gradient echo image to determine the proportion of fat in the liver. The different resonant frequencies between water and fat make this technique very sensitive and accurate. Echo detection under "in-phase" and "opposite-phase" conditions (related to the relative phase of the fat and water proton fractions) allows you to obtain a signal or signal proportional to the water and fat fractions. It is proportional to the amount of fat you get from the water minus the allocation. Next, these signal intensities are combined algebraically to calculate the body fat percentage. The new technology takes into account experimental noise, signal attenuation, and the spectroscopic properties of fat. Numerous empirical studies have shown a good correlation between the degree of steatosis quantified by MRI and the semi-quantitative and quantitative degree of steatosis determined by liver biopsy. Some MRI providers offer automatic calculation of body fat percentage in acquisition sequences that are no longer than a single breath hold.

Contact: Ghazi A, E-mail: Gabbas@hotmail.com