Two More Complications from Obesity and Type 2 Diabetes: Liver cirrhosis and liver cancer

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Until recently hepatocellular carcinoma, a primary malignancy of the liver, has been a very rare cancer in North America and most developed countries. However, the recent escalation in the number of overweight, obese and Type 2 diabetic individuals in our society has contributed to a corresponding rise in cases of liver cirrhosis and related hepatocellular carcinoma cases.

Being overweight, obese, and/or developing Type 2 diabetes promote the deposition of fat into liver cells, primarily due to high circulating insulin levels. As liver cells fill up with fat (triglycerides) it leads to fatty liver degeneration, which later involves inflammation. This condition is known as NASH (non-alcoholic steatohepatitis). As NASH progresses liver tissue often degenerates into cirrohois (an irreversible liver condition), whereby liver cells are no longer able to function normally.

Cirrhosis from A Fatty Diet and Obesity

With cirrhosis a host of signs and symptoms occur due to malfunctioning of liver cells, some of which include: failure of the liver; swelling of the legs (edema); accumulation of fluid in the abdomen (ascites); bleeding from veins in the esophagus (varices); and mental confusion (hepatic encephalopathy). Cirrhosis also increases the chances that hepatocellular carcinoma will develop. Thus, hepatocellular carcinoma is on the increase in our society, directly as a result of overweight, obese and Type 2 diabetes problems.

It should be noted that heavy chronic alcohol consumption can also cause fatty liver problems with associated liver inflammation (steatohepatitis) that resembles NASH, upon blood lab investigation, imaging and biopsy findings.

How Common Is NASH?

Nonalcoholic fatty liver disease is currently the most common liver disease in the U.S. and worldwide, affecting estimated 10-24% of the world's population. In the U.S., the Centers for Disease Control reports that currently, approximately one half of the U.S. adult population is overweight (BMI>25) and one quarter of the U.S. adult population is obese(BMI>30). That means upwards of 29 million Americans have nonalcoholic fatty liver disease, while 6.4 million of these persons have nonalcoholic steatohepatitis (NASH). Even more alarming than these statistics is the fact that nonalcoholic fatty liver disease is occurring among children in the U.S.

Blood Tests Are the First Clue

How do you know if a patient's overweight problem, obesity status, or Type 2 diabetes condition is causing fatty liver changes? The first evidence is a slight rise in serum liver enzymes, especially the ALT and the AST. Thus, it is a good idea to ask these patients to get a copy of their most recent blood work and bring it to your office for review. This also applies to children if they are overweight.

The Solution is Simple

The solution is simply to get the patient to start eating a low saturated fat/cholesterol, transfat diet, which should also exclude deep fried and pan-fried foods. A lower glycemic diet is also helpful, as is the inclusion of regular endurance exercise, all of which pave the way to weight loss, improved blood sugar regulation and lower circulating insulin levels, even in Type 2 diabetics. Applying these simple lifestyle modifications often reduces the ALT and AST into the normal range within 3-6 months, as body fat declines.

In many cases the family doctor does not emphasize sufficiently the importance of lifestyle changes to help the patient decrease their risk of premature morbidity and mortality associated with NASH. As we know being diagnosed with hepatocellular carcinoma, or even cirrhosis for that matter, is no walk in the park. Hepatocellular carcinoma is a cancer that is highly preventable. It is a lifestyle-based cancer in our modern society, and thus, I strongly urge you to see overweight problems as a serious health concern in the patients that attend your office. The truth is that the nutrition and lifestyle plan to overcome obesity, overweight and Type 2 diabetes problems is not that difficult to follow and yield tremendous benefits from a health

and longevity standpoint as well as psycho-social benefits to the patient's quality of life.

References:

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