

Case Study 2: Cirrhosis

Human liver weighs almost 3 pounds and the largest organ in the system. It manufactures blood proteins, which help in oxygen transport, clotting and immune functions. Liver stores excess nutrients and return some to the blood stream. It manufactures bile that helps in food digestion, eliminate harmful substances from the blood like alcohol, drug and so on. In cirrhosis, healthy hepatocytes are replaced with scar tissue and prevent from proper functioning of the liver. The scar tissues obstruct the blood flow through the liver and slow down the processing of hormones, nutrients, toxins, and production of proteins within the liver, which could be recognized by reduction in total plasma protein and low levels of albumin. Signs and symptoms of liver cirrhosis include weakness, fatigue and subsequently, at later stage affected individuals may develop jaundice, confusion, abdominal swelling and gastrointestinal bleeding. In Gerald's case, it is also seen that he was suffering from fatigue, weakness, abdominal swelling since past 6 months. Liver releases bile into stool that gives it a normal colour. However, in case of liver cirrhosis, it inhibits the production of bile and the bowel appears to be pale in colour. Such situation is also evident in Gerald's case. People with liver dysfunction sometimes develop spider angiomas, as the liver fails to metabolize circulating estrogens, typically estrone that comes from androgen androstenedione. Ascites is one of the most prominent complications in liver cirrhosis. Vasodilators are released as portal hypertension develops. These vasodilators affect splanchnic arteries and decrease arterial blood flow and pressure, as well. Prothrombin time is used to measure the blood clotting factors produced in the liver. Hence, increased prothrombin time indicates functional impairment of the liver. Pancytopenia is associated with hypersplenism, in which case the portal hypertension causes sequestration and pooling of corpuscular components of the blood.