

UNDERSTANDING LIVER CIRRHOSIS AND ITS COMPLICATIONS

Haukeland, J¹

¹Oslo University Hospital

Inflammation is always accompanied by deposition of fibrous tissue (fibrosis), in particular when the damaging process is chronic. When such a process has caused extensive fibrosis and regeneration nodules in the liver, the term cirrhosis is used.

HCV infection is normally an asymptomatic disease even in patients with early cirrhosis. As the disease process goes on, however, a broad range of various serious and life-threatening complications may occur. The term cirrhosis, thus, encompasses a broad spectrum of different severity.

To understand these complications it is important to remember that the liver functions as a “cleaning filter” through which the venous blood from the entire gastrointestinal tract flows slowly. The complications may be explained by i) loss of normal liver cells and disturbed microcirculation within the liver, ii) portal hypertension and systemic shunting and iii) oncogenic effects of long lasting inflammation.

- i) Loss of functional liver mass results in coagulopathy (reduced protein synthesis), icterus (reduced biliary excretion of bilirubin), muscle wasting and diabetes mellitus (disturbed metabolism), encephalopathy (reduced detoxification) and increased risk of bacterial infections (altered immune response).
- ii) Portal hypertension induces portosystemic shunting, i.e. portal blood return to the heart without passing the liver. Frequently, dilated blood vessels (varices) arise, typically in the lower part of esophagus. Rupture of varices may cause life-threatening bleeding. Portal hypertension also leads to lower systemic blood pressure and activation of mechanisms leading to renal retention of sodium and water giving rise to fluid accumulation in the abdomen.
- iii) The annual incidence of hepatocellular carcinoma (HCC) in patients with HCV related liver cirrhosis is 2-4%. The more advanced the cirrhosis, the higher the risk. Nevertheless, HCC also occurs in patients not being aware of having cirrhosis.

When liver cirrhosis becomes symptomatic the mortality is high. However, even in advanced cases, eradication of HCV infection will improve the prognosis.