

## Lipid peroxides in cirrhotic and malignant liver disease

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The association of liver cirrhosis (LC) and hepatocellular carcinoma (HCC) is fairly well established. Agents such as hepatitis B virus and carbon tetrachloride predispose to both cirrhosis and carcinoma of the liver. It is possible that an injury which starts as a cirrhotic lesion eventually becomes malignant. The hepatic injury caused by carbon tetrachloride has been shown to be due to specific membrane alterations brought about by peroxidation of membrane lipids. This mechanism may not be confined to carbon tetrachloride. Therefore lipid peroxide levels were studied in patients with LC and HCC irrespective of etiology. Blood lipid peroxide levels were measured in 20 patients with LC, 8 with HCC and 10 healthy controls by thiobarbituric acid reaction. The levels (n mole/ml) were found to be (mean  $\pm$  SD): LC,  $5.11 \pm 1.06$ ; HCC,  $6.0 \pm 0.95$ ; and Controls,  $4.47 \pm 0.29$ . The levels in both groups of patients are significantly higher than in controls ( $P < 0.05$ ), and the levels in HCC are significantly higher than in LC ( $P < 0.05$ ). Hepatic peroxides appear to be a reliable index of liver injury in both cirrhotic and malignant disease.