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Expression of Fas Antigen and Bcl-2 Protein in Liver Tissues of Patients with Chronic Hepatitis B

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**Abstract:** The aim of this study was to evaluate the role of apoptosis in chronic hepatitis B, and correlate it with disease severity. We studied the expression of the Fas antigen (FasAg) and Bcl-2 protein in a group of patients with chronic hepatitis B at various stages of the disease. Four liver biopsy specimens taken from the patients with chronic hepatitis B infection and five control liver tissue specimens with normal histology were studied. Liver specimens were scored for disease severity according to Knodell's hepatic activity index (HAI). The percentage of hepatic expression was evaluated semi-quantitatively. Our immunohistochemical study showed that FasAg was expressed in 92.5% of liver tissues, and detected mainly in the hepatocytes in the periportal region, especially at the advancing edges of areas of piecemeal necrosis. There was a significant correlation between hepatic expression of FasAg and the scores of the hepatic activity index and intensity portal inflammation ( $p=0.04$ ,  $p=0.02$ ). Bcl-2 protein expression was detected in 30% of liver tissues. Bcl-2 protein expression was found in only a few hepatocytes in the periportal region. FasAg and Bcl-2 protein expressions were not detected in liver tissues with normal histology. The present results demonstrate that Bcl-2 protein expression partially protects hepatocytes against Fas-mediated apoptosis. Cell cycle regulation during chronic hepatitis B infection could be controlled by other genes, but further studies are required.

**Key Words:** Fas antigen, Bcl-2 protein, chronic hepatitis B

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