

SERUM CARNITINE LEVELS IN CHILDREN WITH CHRONIC HEPATITIS B AND WITH VARIOUS CHRONIC LIVER DISEASE

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The aim of this study was to evaluate the serum carnitine concentrations and to identify its relationship between both the grade of histological activity and biochemical parameters in children with chronic liver disease. Carnitine metabolism was studied in 91 patients with chronic liver disease, including 39 patients with chronic hepatitis B and 16 patients with different types of cirrhosis, and compared with 36 control subject. Serum total, free carnitine, and acylcarnitine levels were assayed by a radioenzymatic method. The mean \pm SD total carnitine, free carnitine, and acylcarnitine concentrations were 106.4 ± 61.0 mmol/l, 54.3 ± 27.0 mmol/l, 51.9 ± 51.3 mmol/l respectively in patients with chronic hepatitis B, 118.3 ± 41.2 mmol/l, 66.1 ± 24.3 , 52.1 ± 43.0 mmol/l respectively in patients with cirrhosis, 80.5 ± 29.4 mmol/l, 52.2 ± 21.0 mmol/l, 27.8 ± 22.5 mmol/l respectively in healthy controls. Serum total carnitine concentrations were significantly higher in patients with cirrhosis than control subjects ($p = 0.009$). Serum acylcarnitine concentrations were significantly higher in both patients with chronic hepatitis B and cirrhosis than control subjects ($p = 0.030$ for both diseases). There was no correlation between serum total carnitine, free carnitine, and acylcarnitine concentrations with histological grade and biochemical parameters in both patients with chronic hepatitis B and cirrhosis. Serum total carnitine and acylcarnitine concentrations were found to be increased in children with chronic hepatitis B and especially with cirrhosis. In conclusion, there is no role of carnitine as a therapeutic agent in childhood chronic liver disease.

