Lipoprotein (a) behaviour in patients with hepatocellular carcinoma.


Source

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Abstract

BACKGROUND:

Hepatocellular carcinoma (HCC) is a malignancy representing in Europe the 3-5% of all malignant tumors. Metabolic pathway of Lipoprotein(a) [Lp(a)] is influenced by various cytokines delivered during inflammatory and neoplastic diseases. Liver seems to be the main site of Lp(a) synthesis.

METHODS:

A group of patients affected by HCC was studied in order to evaluate the changes in serum Lp(a) levels and their significance. Participants: 40 patients (25 males and 15 females) affected by primary HCC and 25 control healthy subjects (12 males and 13 females). In HCC patients we evaluated the following serological parameters: Lp(a), total cholesterol (TC), LDL-Cholesterol (LDL-C), HDL-Cholesterol (HDL-C), triglycerides (TG), albumin, (pseudo)cholinesterase (CHE), aspartate amino-transpeptidase (AST), alanine amino-transpeptidase (ALT), gamma-glutamyl transpeptidase (g-GT), alkaline phosphatase (ALP), ferritin, alpha fetoprotein, partial thromboplastin time (PTT), Quick time, prothrombinic activity (PA) and fibrinogen. Statistical analysis of the data obtained was performed using the variance analysis (ANOVA method) and Student's Oto for non-paired data test. For Lp(a), Wilcoxon's non parametric test was used. The correlations between examined parameters were performed by Pearson's correlation test.

RESULTS:

In patients with HCC, mean serum TC, LDL-C TG and Lp(a) levels were significantly lower than in controls. HDL-C did not show a statistically significant difference between the two groups studied. Furthermore, we found a positive correlation between Lp(a) and CHE, Lp(a) and albumin, CHE and LDL-C; while a negative correlation has been found between Lp(a) and alpha-fetoprotein, Lp(a) and ferritin, CHE and alpha-fetoprotein.

CONCLUSIONS:

On the basis of the relationship with alfa fetoprotein and ferritin serum levels, Lp(a) seems to represent an indirect index of liver damage. Lp(a) is a risk factor for vascular diseases and seems to have an interesting role in the liver functions. We conclude that the evaluation of Lp(a) serum levels may contribute, among other markers, to a more complete evaluation of the liver function in patients with HCC suggesting a predictive role for this lipoprotein.

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