

Levels of Serum Transaminases in Patients with Chronic Hepatitis C Correlate with Sources of Infection

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Introduction

The purpose of the study was to investigate the significance of the risk factors in development and chronic course of hepatitis C. The levels of alanine and aspartate transaminases were compared among the groups of patients who had contracted the infection by different means.

Methods

Patients with chronic hepatitis C (n=440) who contracted the infection by different means were examined. The source of infection was established in 344 (78.2%) but not established in 96 (21.8%) of cases. Known sources of infection were identified as use of narcotics, surgical operations, sexual contacts, tattoo and piercing, blood transfusions, dental manipulations, injections, professional blood contact, and routine daily patient care. All patients had blood tests to determine biochemical levels of alanine (ALT) and aspartate (AST) transaminases (mmol/l*h).

Results

The highest average indices of ALT and AST were in drug users (2.3 ± 0.1 and 1.4 ± 0.07). Significant levels were also found in patients who contracted hepatitis through tattooing and piercing (1.7 ± 0.4 and 0.7 ± 0.1), medical re-use of syringes (1.7 ± 0.2 and 1 ± 0.1), routine patient contact (1.7 ± 0.4 and 1 ± 0.25), and blood transfusion (1.65 ± 0.2 and 0.99 ± 0.1). Lower levels were found in patients who acquired the infection by professional blood contact (1.15 ± 0.2 and 0.6 ± 0.1), sexual contacts (1.3 ± 0.2 and 0.8 ± 0.1), dental (1.07 ± 0.1 and 0.75 ± 0.1) and surgical manipulations (1.45 ± 0.1 and 0.8 ± 0.07), ($p > 0.05$). In the group of patients with unknown sources of infection the indices of ALT and AST were considerably lower than in others - 0.99 ± 0.1 and 0.66 ± 0.06 ($0.01 < p < 0.05$).

Conclusions

This study demonstrates that the levels of transaminases differ in patients with chronic hepatitis C according to the sources of infection. Determination of the known risk factors has a value in defining the disease prognosis.