Paraoxonase activity in sera of patients with non-alcoholic fatty liver disease

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ABSTRACT
The results of our study showed significantly decreased levels of PON1 in patients with chronic liver diseases (controls 185 ± 14 U/l, NAFLD 160 ± 15 U/l, chronic hepatitis 99 ± 18 U/l, cirrhosis 52 ± 11 U/l). There were significant correlations of PON activities with standard liver function tests (Tab. 1, Ref. 5). Text in PDF www.elis.sk.

KEY WORDS: paraoxonase, fatty liver disease, oxidative stress, NAFLD.

Results
The results of our study showed significantly decreased levels of PON1 in patients with chronic liver diseases (controls 185 ± 14 U/l, NAFLD 160 ± 15 U/l, chronic hepatitis 99 ± 18 U/l, cirrhosis 52 ± 11 U/l). There were significant correlations of PON activities with standard liver function tests (Tab. 1).

Discussion
The significant decrease of PON1 activity in chronic liver diseases was related to the degree of hepatic dysfunction. Our finding of decreased activities of PON1 in sera of patients with NAFLD is in agreement with the findings of Atamer et al (1) and Wang et al (2). The decreased PON1 activities in other chronic hepatopathies are also in agreement with data from human and experimental studies (3, 4). The physiological role played by PON1 in the liver is unknown, although preliminary observations suggest its role in hepatic protection against oxidative stress. The decreased activity of PON1 as an antioxidant could play a role in the defective antioxidant defence and participate in the increase of oxidative stress. On the other hand, decreased activity of PON1 in patients with chronic liver diseases could be the result of damage of hepatocytes and reduced volume of functional liver parenchyma. This suggestion is supported by a good correlation between PON1 activities and...
levels of prealbumin and albumin, which are accepted as parameters of liver function. The hypothesis that the differences between PON1 activities in controls and patients with hepatopathies are the consequence of differences in genotype frequency distribution in patients and controls was discarded by Ferré et al. (5), who found in their study that genotype distributions were not significantly different between the patients with hepatopathies and the controls.

References


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