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Effect of antiviral therapy on serum activity of angiotensin converting enzyme in patients with chronic hepatitis C

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**Introduction**: Renin-angiotensin system (RAS) is frequently activated in patients with chronic liver disease. Angiotensin-II (AT-II), produced by angiotensin converting enzyme (ACE), has many physiological effects, including an important role in liver fibrogenesis. Combined antiviral therapy with PEG-IFN and ribavirin besides its antiviral effect also leads to a reduction in liver parenchyma fibrosis.

**Aim**: Determining the value of ACE in serum of patients with chronic hepatitis C before and after combined antiviral therapy, as well as the value of ACE activities in sera of the control group.

**Materials & Methods**: We studied 50 patients treated at Gastroenterohepatology Department, in the time-period of four years. Value of ACE in serum was determined by Olympus AU 400 device with application of kit "Infinity TN ACE Liquid Stable Reagent". HCV RNA levels in sera were measured by real time PCR. HCV RNA test was performed with modular analysis of AMPLICOR and COBAS AMPLICOR HCV MONITOR test v2.0, which has proved infection and was used for quantification of the viruses and monitoring of the patients' response to therapy. Liver histology was evaluated in accordance with the level of necroinflammation activity and stage of fibrosis.

**Results**: Serum activities of ACE in chronic hepatitis C patients is statistically higher than the values in the control group (p=0.02). Antiviral therapy in chronic hepatitis C patients statistically decreases serum activities of ACE (p=0.02) and indirectly affects fibrogenesis of the liver parenchyma. Correlation between ACE and ALT activity after the therapy was proved (0.3934).

**Conclusion**: Our findings suggest that the activity of ACE in serum is a good indirect parameter of the liver damage and could be used as an indirect prognostic factor of the level of liver parenchyma damage. Serum activity of ACE can be used as a parameter for non-invasive assessment of intensity of liver damage.

## **Biography**

Azra Husic-Selimovic is an Associated Professor Chair of Internal Medicine, Medical Faculty, University of Sarajevo, Bosnia and Herzegovina and Sub-specialist in Gastroenterology and Hepatology from 2010. She received Doctor of Medical Science with research interest in Hepatology and Viral Hepatitis. She obtained Master of Science in Medicine with scientific area: Hepatology and Alcoholic Liver Disease.

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