

## HEPATITIS C

# #P02 - The value of hyaluronic acid testing in HCV- induced early fibrosis verification

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### Background & Aims

Blood-based tests looking at fibrosis serum markers and laboratory variables are widely available. These markers are of particular value in the diagnosis of early stages of liver fibrosis including viral origin. Taking into account the unconditional economic benefit of hyaluronic acid (HA) indication we questioned whether the level of HA could become an alternative to well-known investigation procedures of liver fibrosis of viral origin.

### Methods

48 patients with chronic viral hepatitis C (CHC) and initial stages of liver fibrosis (F0 - F2, according to fibroelastometry, evaluated by the METAVIR scale) participated in the study. The control group consisted of 21 completely healthy people. All patients with CHC and group of control determined the level of HA in the blood serum (ELISA).

### Results

The level of HA in the serum of patients with CHC was ( $53.29 \pm 7.85$ ) ng/ml vs. healthy individuals: ( $22.82 \pm 2.75$ ) ng/ml ( $p < 0.001$ ).

Elevation degree correlated with the level of HA: in patients with morphological signs of liver fibrosis (F2), the level of HA was ( $57.62 \pm 3.52$ ) ng/ml vs. among patients with no or initial fibrosis (F0 - F1): ( $47.75 \pm 2.31$ ) ng/ml ( $p = 0.05$ ).

The conducted ROC-analysis showed higher sensitivity of the method for determining the level of HA in the blood serum of patients with the degree of liver fibrosis F0 - F2 than that one of fibroelastometry: 91.23% vs. 74.33%, respectively.

The area under the curve (0.914), indicated the high diagnostic informativeness of this method for establishing liver fibrosis F0 - F2 ( $p < 0.001$ ).

In order to verify the degrees of liver fibrosis F0 - F2, we determined the cut-off value of HA in the blood serum of patients with CHC: 45.44 ng/ml in patients with the degree of liver fibrosis F0 - F1 (sensitivity 79.0%, specificity 64.0%) and 52.55 ng/ml in patients with F2 degree (sensitivity 72.0%, specificity 69.0%).

### Conclusions

The reliably high diagnostic informativeness of the level of HA in the blood serum of patients with initial liver fibrosis, combined with economic benefit, indicates the possible alternative of this diagnostic method to fibroelastometry.