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Regression of Liver Stiffness after Successful HCV-Treatment and Associated Factors in HCV Mono-Infected and HCV-HIV Co-Infected Patients

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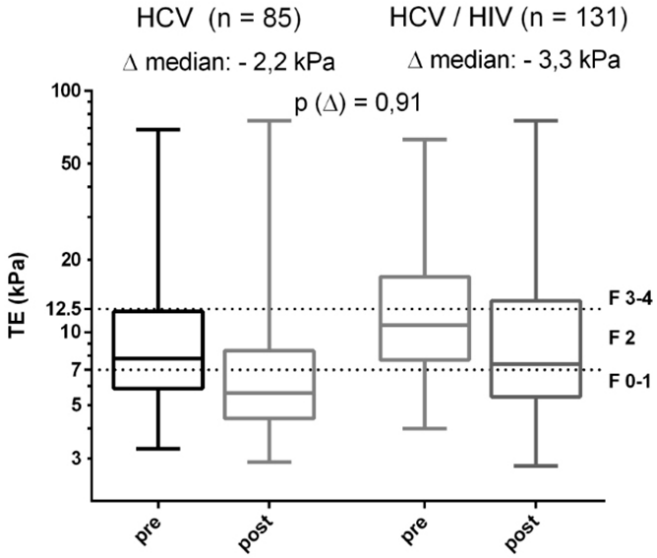
Abstract Text

Background: Direct acting antivirals (DAA) represent a breakthrough in the treatment of chronic HCV-infections with cure rates (sustained virologic response, SVR) of up to 99%. However, for interferon-free treatment regimens less is known about their impact on clinical endpoints, especially in case of HCV-HIV co-infection. One of the most compromising issues in chronic HCV-infections is the development of liver fibrosis, which can be assessed as liver stiffness by noninvasive methods. We assessed the regression of liver stiffness after successful DAA-treatment in patients with HCV mono-infection and HCV-HIV co-infection. In addition, we aimed to identify predicting factors of a significant regression.
Methods: We studied patients treated with interferon-free DAA-regimes with a SVR at week 12 or 24 posttreatment. Liver stiffness was assessed by transient elastography (TE) within 48 weeks prior to and up to 48 weeks after end of treatment. A decline in liver stiffness of at least 30% was defined as significant. Student-t tests and multivariable logistic regression were used for statistical analysis.
Results: Among 216 enrolled patients 85 (39%) were HCV mono- and 131 (61%) HIV co-infected. Baseline median TE-values were 7.8 kPa (IQR: 5.9-12.2) in mono- and 10.7 kPa (IQR: 7.7-17.0) in co-infected patients. Overall, the median TE-value decreased after SVR from 10.05 kPa to 6.8 kPa (n=216; p<0.0001). There was no difference between mono and co-infected patients. Grouped analyses showed decreases in median liver stiffness of -2.2 kPa in mono-infected and -3.3 kPa in the co-infected group (p=0.91). Significant regression of liver stiffness was achieved by 45% of all patients and 54% of patients with TE ≥7.1 kPa at baseline. In multivariable analysis prior HCV treatment was a strong negative predictor of liver stiffness regression (OR 0.34; p<0.005). Higher baseline TE-values were positively associated with achieving a significant regression (OR 1.06; p<0.05). HIV co-infection, age, male sex, duration of treatment, controlled attenuation parameter (CAP), bilirubin, platelet count and AST had no significant impact on liver stiffness regression (OR 0.81, 1.03, 1.03, 1.01, 1.0, 0.80, 0.99 and 0.99, respectively).
Conclusion: An HCV-SVR leads to significant regression of liver stiffness in patients with chronic HCV-Infection and HCV-HIV co-infection. Pretreatment for HCV is a strong negative predictor for achieving a significant (≥30%) regression, while HIV-coinfection had no impact on stiffness regression.



Disclosures

Juergen Kurt Rockstroh – Abbott, Gilead, Janssen, Merck, ViiV: Consulting; Abbvie, Gilead, Janssen, Merck: Speaking and Teaching

The following people have nothing to disclose: Jakob Malin, Jan Christian Wasmuth, Jonel Trebicka

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