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Rapid virological response is the best predictor for achieving SVR under peg-IFN/ribavirin hepatitis C therapy in HIV/HCV co-infected patients

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Background

Within the Köln/Bonn cohort, all IFN/RBV-treated HIV/HCV co-infected patients were evaluated for treatment outcome and possible predictive factors for achieving cure of HCV infection defined as undetectable HCV-RNA 24 weeks upon completion of HCV therapy (SVR).

Methods

Patients included in this retrospective multicentre cohort study received peg-IFN (1.5 µg/kg body weight or 180 µg, respectively) once weekly and weight-based RBV (600–1200 mg) once daily. Patients with HCV-genotypes 2 or 3 were treated for 24 or 48 weeks; patients with genotype 1 or 4 received 48 weeks of therapy. Primary end-point was SVR. Binary logistic regression and calculation of positive predictive values (PPV) were used to identify prognostic parameters for achieving SVR and EVR (early virological response defined as undetectable HCV-RNA after 12 weeks of IFN/RBV treatment), respectively.

Summary of results

A total of 227 HIV/HCV co-infected patients were included. Patients were predominantly male (73%), mean age was 41 years, 59,5% received HAART. The distribution of HCV-genotypes (GT) was as follows: GT 1: 56%, GT 2: 6%, GT 3: 31%, GT 4: 7%. Further baseline characteristics (median) were: CD4-count 531/µL (26%), HIV-RNA 11.635 cps/mL, HCV-RNA 2.444.870 IU/mL, ALT 69 U/L, Hb 14.4 g/dL, leucocytes 5810/µL, platelets 190/nL. SVR was achieved by 41% (GT 1/4: 32%; GT 2/3: 59%) of all patients. HCV-GT 2 or 3 ($p < 0.001$, 95% confidence interval [CI] 2.19 to 8.02; PPV 67.82%), rapid virological response (RVR, defined as undetectable serum-RNA at week 4) ($p < 0.001$, CI 5.42 to 44.36; PPV 83.78%) and EVR ($p < 0.001$, CI 6.71 to 26.01; PPV 71.56%) were the best independent predictors for achieving SVR. Positive predictives for EVR were HCV-GT 2 or 3 ($p < 0.001$, CI 2.81 to 10.55; PPV 78.68%), RVR ($p < 0.001$, CI 3.36 to 24.24; PPV 87.23%) and the lack of HAART ($p = 0.043$, CI 0.28 to 0.98; PPV 64.82%).

Conclusion

The most reliable predictive factor for achieving sustained virological response in HIV/HCV co-infected patients treated with peg-IFN plus RBV is to obtain rapid virological response. Further positive predictives for obtaining SVR are infection with HCV-GT 2 or 3 and early virological response (EVR). Positive predictive factors for obtaining EVR are again HCV infection with GT 2 or 3, RVR and, interestingly, also stable HIV infection without a need for HAART therapy.