O1034 HCV eradication by direct-acting antivirals is associated with an increase in platelet count: a 2-year follow-up study

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Background: Thrombocytopenia is observed in up to 76% of patients with chronic liver disease and severe thrombocytopenia (<50,000/µl) is associated with relevant morbidity and mortality in patients with chronic hepatitis C (CHC). Although multiple factors are thought to be responsible for thrombocytopenia in CHC it is still unclear how platelet count may vary after viral eradication.

Materials/methods: We examined the kinetics of platelet count in a large cohort of CHC patients during and after treatment with direct acting antivirals (DAAs). To this end, we designed a retrospective cohort study on 11,351 patients with CHC treated with DAAs enrolled in 40 centers of Rete HCV Lombardia database. Clinical/demographic data were collected at baseline, during treatment and over a 2-year follow-up period. Multilevel mixed linear (univariable and multivariable) models were applied, with patient as random effect and timepoint as fixed effect, adjusting for baseline platelet count.

Results: Mean age was 60 years and males were predominant (59%). Mean liver stiffness value was 14.5 KPa and mean Child-Pugh and Meld scores were 5.37 and 7.96, respectively. Mean viral load at baseline was 2,353,863 IU/mL and the most frequent genotypes were 1b (44%), 1a (15%) and 3 (15%); SVR12 was achieved in 97.3% of patients. Other conditions associated with liver disease were alcohol abuse (10.50%) and co-infection by HBV (0.4%) and HIV (14%). Mean platelet count (130,000/µl) significantly increased at week 4 on treatment from baseline, decreased to baseline values by week 12 of follow-up, and progressively increased thereafter to reach 156,000/µl 2 years after viral eradication (p-value <0.001, Fig.1).

Conclusions: In our cohort of patients achieving HCV eradication after DAA treatment, we observed a significant increase in platelet count over a 2-year follow-up period, which was maintained after adjusting for baseline values. Further analysis will be performed to evaluate factors associated with platelet kinetics over time and to assess thrombopoietin levels.
Figure 1. Platelet count in CHC patients treated with DAAs during time.