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Reply to "Vitamin D deficiency and HCV chronic infection: What comes first?"

To the Editor:

We thank Dr. Bitetto *et al.* for their interest in our study recently published in the *Journal of Hepatology* [1]. In this study, we reported a high prevalence of severe vitamin D deficiency in patients with chronic hepatitis C, even in the absence of significant liver fibrosis. We found that vitamin D deficiency was associated with failure to achieve a sustained virologic response (SVR) to therapy of chronic hepatitis C with pegylated interferon-alfa and ribavirin. Bitetto *et al.* have now accentuated the important question, whether vitamin D deficiency is caused by hepatitis C virus (HCV) infection, or whether vitamin D deficiency may confer an enhanced susceptibility to chronic HCV infection. We believe that this question cannot be finally answered at the moment. In our study, we reported a slight increase of 25-hydroxyvitamin D serum levels from baseline to week 24 after completion of antiviral therapy in those patients who achieved a SVR. As highlighted by Bitetto *et al.* and others [2,3], we have made an attempt to stratify the patients included in this sub-analysis according to the season in which serum samples for vitamin D measurement were taken. In detail, 50% of patients started therapy in winter/spring and SVR was ascertained in summer/autumn, which was vice versa in the remaining 50% of patients. Meanwhile, we have also re-analyzed our complete cohort according to the season when baseline serum samples for vitamin D detection were taken. Although we observed slightly lower baseline 25-hydroxyvitamin D serum levels in patients who started therapy in winter/spring compared to summer/autumn (mean 16.6 and 18.7 ng/ml, $p = 0.054$), severe vitamin D deficiency (<10 ng/ml) was associated with chronic HCV infection during all seasons (26% *vs.* 19% in winter/spring *vs.* summer/autumn, respectively, compared to 20% *vs.* 6% in winter/spring *vs.* summer/autumn samples in our non-HCV infected control group). In addition, season had no significant influence on SVR rates. Nevertheless, we fully agree with Bitetto *et al.* that our observations do not prove that HCV infection itself can cause vitamin D deficiency. In addition to a residual season influence, factors such as changes in life-style or eating habits may contribute to the increase of vitamin D serum levels after successful HCV eradication. To resolve the "what comes first" question results of basic research on a potential interplay between HCV infection and vitamin D metabolism, as well as additional clinical data from large and well defined patient cohorts are required.

Conflict of interest

The authors declared that they do not have anything to disclose regarding funding or conflict of interest with respect to this manuscript.

References

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Tips for portal vein thrombosis (pvt) in cirrhosis: Not only unblocking a pipe

To the Editor:

Han *et al.* recently published a case series of patients with cirrhosis who had developed portal and splanchnic vein thrombosis at various intervals from treatment with transjugular intrahepatic portosystemic shunt (TIPS), for complications of the resulting portal hypertension [1]. We are pleased that they confirmed our published findings that TIPS is feasible and effective in patients with PVT, including those with cavernous transformation of the portal vein [2].