LETTER TO THE EDITOR

Non-invasive evaluation of liver fibrosis using FibroScan in long-term sustained-virological responder patients after HCV treatment

Évaluation non invasive de la fibrose hépatique par FibroScan chez des patients avec une réponse virologique prolongée après traitement de l’hépatite C

Patients with undetectable serum HCV-RNA 6 months after the end of HCV therapy are called sustained-virological responders (SVR) and are considered to have eliminated the virus permanently. However, because liver histology rather than plasma viremia is the most important prognostic factor in patients with chronic HCV infection, it is necessary to know how virological clearance is associated with histological improvement. In patients with chronic hepatitis C with or without cirrhosis, peginterferon alfa-2a significantly reduces fibrosis [1]. The beneficial effects of peginterferon on liver histology are closely related to virological response. Histological assessment of chronic hepatitis C is classically based on liver biopsy. Non-invasive approaches have recently been developed to replace liver biopsy as the unique tool to collect information on liver fibrosis [2–5]. In France, FibroScan and Fibrotest are recommended for the initial evaluation of liver fibrosis in previously untreated HCV-infected patients with no associated health disorders [6]. Recently, it has been shown that whatever the virological response, treatment for HCV infection was associated with improved FibroScan and Fibrotest values [7]. Therefore, the assessment of liver fibrosis is now available for all patients, even in patient who cannot undergo liver biopsy for ethical reasons, such as very long-term responders to HCV treatment. The aim of this study was to describe FibroScan values in previously untreated HCV-infected patients with no associated health disorders [6].

Between May 2003 and February 2008, all consecutive patients with HCV infection, who underwent liver biopsy before treatment, received a full course of standard interferon (with or without ribavirin) or pegylated interferon plus ribavirin therapy and who had an SVR for more than one year were included. Patients should have had negative HCV-RNA 6 months after the end of treatment and the day of liver-stiffness assessment. Liver stiffness was assessed in all patients by the non-invasive FibroScan technique. Because transient elastography was not available for any patients before treatment was begun, liver biopsy (METAVIR score) was used to assess liver fibrosis before treatment.

A total of 200 SVR patients who had completed a full course of interferon (or peglated interferon) with or without ribavirin between April 1991 and February 2006 were included. Most patients were males (53%) and the mean age was 55 years old. Most of the patients were infected with genotype 2 or 3 (54.5%) and most of them had moderate fibrosis before treatment. The mean duration between the end of HCV treatment and the non-invasive assessment of fibrosis was 3.6 ± 2.0 years (range: 1–16 years), with no difference in the stage of fibrosis before treatment. The characteristics of the 200 patients included and the non-invasive assessment of liver stiffness are found in Table 1. The histological assessment, based on the measurement of liver stiffness compared to liver fibrosis before treatment, is found in Fig. 1. In the group of patients with cirrhosis before treatment, 33 (82.5%) underwent FibroScan less than 12.5 kPa (cut-off for the diagnosis of cirrhosis using FibroScan). In the remaining patients, one had severe cirrhosis (large oesophageal varices), three had small oesophageal varices, and two patients also had cirrhosis according to the FibroTest. The last patient had a FibroScan of 14.7 kPa, but no cirrhosis according to other non-invasive tests. In patients with F0–F1–F2 fibrosis before treatment, none had FibroScan greater than 10 kPa at the end of follow-up.

The long-term impact of sustained HCV clearance on liver fibrosis was examined using the FibroScan in a large cohort of HCV patients who had received a full course of IFN-based
Changes in the degree of liver fibrosis after IFN-based therapy have been investigated in HCV patients using paired-liver biopsies. Most studies have demonstrated lower-inflammatory activity and less fibrosis in patients who have an SVR [1,8]. In our study, the longer the interval (4 years on average) between the end of HCV therapy and the assessment of liver fibrosis, the more adequately the impact of HCV clearance on liver fibrosis could be evaluated. Confirmation that an SVR is associated with a steady regression of hepatic fibrosis has important clinical consequences in HCV patients. Indeed, in patients with cirrhosis, achieving an SVR after IFN therapy is associated with a reduction in liver-related mortality, lowering both the risk of complications and the development of hepatocellular carcinoma [9].

Liver stiffness decreases in SVR patients. This alteration may reflect biochemical changes associated with disease activity, as opposed to changes in fibrosis per se. However, in this long-term study of a large cohort of SVR patients, low-FibroScan values should be related to the decrease of liver fibrosis.

In summary, the results of this study emphasize the importance of FibroScan in the follow-up of HCV patients. This study suggests that the evaluation of the regression of liver fibrosis is feasible with FibroScan. These preliminary results require further investigation, in particular a comparison between FibroScan and liver biopsy after HCV treatment.

### References


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