Improvement of liver stiffness in patients with hepatitis C virus infection who received direct-acting antiviral therapy and achieved sustained virological response

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Abstract

Background and Aim

There is insufficient research on whether direct-acting antiviral (DAA) therapy can improve liver fibrosis in patients with chronic hepatitis C virus (HCV). We evaluated sequential changes in liver stiffness using shear wave elastography in patients with HCV who received DAA therapy.
Methods

A total of 210 patients with HCV who received daclatasvir and asunaprevir therapy and achieved sustained virological response (SVR) were analyzed. Liver stiffness, as evaluated by shear wave elastography, and laboratory data were assessed before treatment (baseline), at end of treatment (EOT), and at 24 weeks after EOT (SVR24).

Results

Alanine aminotransferase levels (ALT) decreased over time, and there were significant differences between baseline and EOT and between EOT and SVR24. Although platelet counts did not significantly differ between baseline and EOT, they increased significantly from EOT to SVR24. The median (interquartile range) liver stiffness values at baseline, EOT, and SVR24 were 10.2 (7.7–14.7), 8.8 (7.1–12.1), and 7.6 (6.3–10.3) kPa, respectively ($P < 0.001$, baseline vs EOT; $P < 0.001$, EOT vs SVR24). Additionally, in patients with ALT $\leq 30$ (indicating low necroinflammatory activity in the liver) and Fibrosis-4 index $> 2.0$ ($n = 75$), the liver stiffness values at baseline, EOT, and SVR24 were 9.6 (7.7–15.2), 9.2 (7.3–12.1), and 7.7 (6.3–10.1) kPa, respectively ($P < 0.001$, baseline vs EOT; $P < 0.001$, EOT vs SVR24).

Conclusion

These results suggest that early improvement of liver stiffness starts during the administration of DAAs in patients who achieve SVR, and this effect is particularly pronounced in patients with progressive liver fibrosis.
Viral eradication reduces all-cause mortality, including non-liver-related disease, in patients with progressive hepatitis C virus-related fibrosis

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Citing Literature
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