Proteus Digital Health: Investigator, Saturday, October 6, 2018: 12:30 PM
Session: Philadelphia, Pennsylvania
Diseases and HIV Medicine, Drexel University College of Medicine, Philadelphia, Pennsylvania
Assistant
Patients
2221. Active Substance Use Should Not Be a Contraindication for Hepatitis C Treatment
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Session: 238. Hepatitis A, B, and C
Saturday, October 6, 2018: 12:30 PM
Background. Real-world data on adherence to new oral hepatitis C virus (HCV) therapies are limited. Suboptimal adherence can lead to unnecessary treatment failures. Usual methods to measure adherence are inaccurate, and do not allow for opportunistic intervention. The digital medicines program (DMP) consists of DigiMeds™ (medicines with an ingestible sensor), a wearable sensor patch that confirms ingestion, the Proteus Discover™ mobile app, and secure web portal to allow for timely assessment of adherence, prevent missed doses, and maximize the likelihood of sustained virologic response (SVR), or cure. This study evaluated adherence and virologic outcomes in chronic HCV patients treated with sofosbuvir/ledipasvir (SOFV/LDV) using the DMP.
Methods. This was a single-arm, prospective, open-label, pilot study at two sites SOFV/LDV tablets co-encapsulated with ingestible sensors allowed the DMP to record ingestion adherence rates (number of ingestions detected/number of expected ingestions). Other outcomes were medical interventions, SVR 12 weeks after end of treatment, patient satisfaction, and safety.
Results. All 28 subjects (age 59 ± 7 years [mean ± SD], 61% male, 39% Caucasian, 93% treatment-naïve) had HCV genotype 1; 27 completed treatment. Most (82%) had <25,000 income/year, 46% had psychiatric comorbidities, and 52% had a history of drug abuse. The DMP was used for 92% of expected days; mean ingestion adherence was 94%. Providers used the DMP data for same-day adherence interventions in 39% of patients. SVR was achieved in 26 of 28 subjects (2 had failed prior therapy). One subject who did not achieve SVR had high adherence (≥95%), suggesting viral resistance; the other was non-adherent (<90%). Most (92%) agreed the DMP helped them feel more involved in managing their healthcare and easy to use in their daily routine; 85% agreed the DMP helped them understand the importance of taking medications regularly. Four subjects reported four nonserious adverse events of rash/pruritus, which resolved and were consistent with use of adhesives.
Conclusion. These data suggest the DMP may be used to support adherence to therapy through targeted, same-day adherence interventions, and optimize SVR rates, including in those with risk factors for nonadherence and in those who previously failed treatment.
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2222. Impact of Sustained Virologic Response Achieved Through Newer Direct Acting Antivirals in Hepatitis C Infection on Diabetes Mellitus
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Background. Hepatitis C virus (HCV) infection is one of the leading causes of mortality and morbidity in the United States with an incidence of 0.7 cases per 100,000 population and a prevalence of ~2.7 to 3.9 million people. To our knowledge only one study was performed so far to assess the relation between treating hepatitis C virus using direct acting antiviral drugs (DAA) and reduction in the severity of type 2 diabetes mellitus (DM). Our study aims to assess the effect of SVR in hepatitis C virus-on type 2 DM. The effect of the management with newer agents leading to sustained virologic response (SVR) on type 2 DM was analyzed in hepatitis C virus infection.
Methods. We performed a retrospective chart review in our hepatitis clinic located in Shreveport, Louisiana. Patients with age greater than 18 years old, who has both uncontrolled hepatitis C and type 2 DM, seen in our clinic from November 1, 2014 to December 31, 2017 were included. Hospital electronic health records were screened for diagnosis of hepatitis C and uncontrolled type 2 DM by ICD codes. We performed paired sample t-test between pre- and 6-month post-treatment-values of fasting blood sugar and Body Mass Index (BMI).
Results. There was a statistically significant improvement in fasting blood sugar levels following hepatitis C therapy from 184.2 ± 74.8 to 133.06 ± 48.2 (P < 0.01), with an improvement of 51.2 ± 77.6 respectively (N = 49). There was a statistically significant improvement in HbA1c levels following hepatitis C therapy from 8.062 ± 1.8 to 7.019 ± 0.96 (P < 0.05), with an improvement of 1.042 ± 2.03 respectively (N = 21). There was no statistically significant improvement in BMI levels following hepatitis C therapy from 29.91 ± 6.6 to 29.79 ± 6.7 (P > 0.05), with slight improvement of 0.11 ± 2.08 respectively (N = 49).
Conclusion. We conclude that there was statistically significant reduction in fasting blood sugar and hemoglobin A1C levels after achieving sustained virological response with new direct antiviral treatment for hepatitis C. Pre- and posttreatment change in body mass index was statistically significant implying decrease in blood sugar level was not due to weight loss. There was no change in diabetic medication during the period of the study or there were no dose adjustments occurred.
Disclosures. All authors: no reported disclosures.

2223. Effect of Direct-Acting Antivirals in Hemodialysis Patients with HCV: Real-Life Data
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