Elbasvir/Grazoprevir with or without Sofosbuvir for Patients with Chronic Hepatitis C Virus Infection Post Solid Organ Transplantation

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Abstract

Background: A critical challenge in HCV therapy is managing patients who undergo solid organ transplantation. Elbasvir/grazoprevir, a combination of NS5A inhibitor and NS3/4A protease inhibitor, is considered a first-line treatment for chronic HCV infection. Elbasvir/grazoprevir is a newly approved treatment administered as a fixed-dose combination of NS5A inhibitor and NS3/4A protease inhibitor. It has been widely explored in patients with HCV GT 1 and 4 infections, and the combination is recommended for HCV treatment by the American Association of the study of liver disease. However, to date, clinical experience with grazoprevir/elbasvir in the post-transplant setting is limited. In this retrospective observational study, we aimed to assess the safety and effectiveness of elbasvir and grazoprevir in a real-world, difficult to treat, post solid organ transplant setting. Material and Methods: The study involved evaluation of the patients with HCV infection post solid organ transplantation and administered elbasvir/grazoprevir with/without sofosbuvir in retrospective manner. Results: Forty-six patients were enrolled in the study. Of those, 27 (58.69%) were men; 17 (37%) had genotype 1 and 22 (47.8%) had genotype 4 HCV infections, and 30 (65.2%) were treatment experienced. The intention-to-treat analysis revealed that 45 (97%) achieved SVR12 and 44 (95%) achieved SVR24. No treatment-related adverse effects were identified. Conclusion: elbasvir/grazoprevir is safe and effective for treating patients with HCV infection post solid organ transplantation, which is on the most difficult to treat population, at reduced cost in comparison to other available direct acting antiviral.

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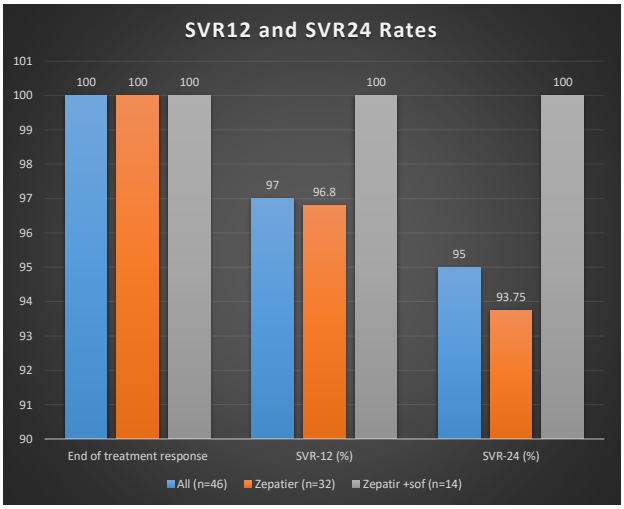
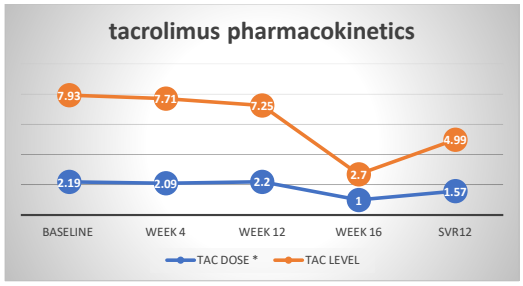


Figure 1: SVR12 rates.

A. Tacrolimus



B: Cyclosporine

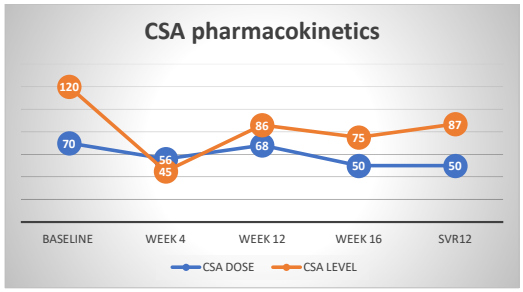


Figure 2: Pharmacokinetics of immunosuppressants. Immunosuppressant dosage from baseline until their discontinuation in liver and kidney transplant recipients, and their corresponding levels. Mean total daily dosages of tacrolimus (part A) and cyclosporine in mg (part B) are mapped using the left *y*-axis; mean trough levels in ng/mL of tacrolimus (part A) and cyclosporine (part B) are mapped using the right *y*-axis.

Abbreviations: BL, baseline, FK: tacrolimus, CSA: cyclosporine