Successful Treatment of Cirrhotic People With HCV GT3 Infection With Elbasvir/Grazoprevir Plus Sofosbuvir ± Ribavirin Does Not Correct Insulin Resistance

Background
- Insulin resistance and altered lipoprotein metabolism are features of hepatitis C virus (HCV) genotype (GT)3 infection.
- Advanced cirrhosis is associated with insulin resistance and reduced glucose effectiveness.
- In individuals with HCV GT 3 infection, insulin resistance is associated with degree of fibrosis.
- People with more advanced fibrosis have a higher degree of insulin resistance.
- HCV viral clearance is associated with improved insulin resistance in individuals with some genotype.
- People with GT 3 infection showed improved insulin resistance, but not those with HCV GT 3 infection.
- Most people with GT 3 infection in this study had mild liver fibrosis (METAVIR F0-F1) and only 35% had insulin resistance.

Study Design
- The study was a randomized, open-label, UK-based clinical trial involving Genotype 3 infected people with compensated cirrhosis.
- Adult participants with chronic HCV GT3 infection were included.
- The primary endpoint was SVR 12 weeks after completion of therapy (SVR12, HCV RNA <15 IU/mL).

Participants and Methods
- All participants with chronic HCV GT3 infection were included.
- Comparted liver cirrhosis defined by liver biopsy (METAVIR F4) or transient elastography (≥12.5 kPa).
- Treatment-naïve, experienced, non-treatment-experienced, or treatment-experienced people and HCV co-infected individuals.
- The primary endpoint was SVR 12 weeks after completion of therapy (SVR12, HCV RNA <15 IU/mL).

Patients and treatment assignment:
- All participants received EBR/GZR plus SOF therapy.
- Participants were randomized to receive either RBV (EBR/GZR + SOF + RBV) or no RBV (EBR/GZR + SOF).

Tables
- Table 1: Demographics and Characteristics
- Table 2: Change in HOMA-IR values in participants who relapsed

Figure 1: EBR/GZR plus SOF

Figure 2: Study design

Figure 3: Change in HOMA-IR values during treatment and follow-up

Figure 4: Median HOMA-IR values during treatment and follow-up

Conclusions
- In the present study, participants with HCV GT3 infection and cirrhosis were notable for a high incidence of diabetes.
- Of participants had a medical history of diabetes.
- 81% of participants had HCV GT3-2a at baseline.
- Median HOMA-IR values did not improve for these participants during or following therapy.
- There are no apparent changes insulin resistance with virologic failure.
- The small number of participants with virologic failure makes interpretation of these data difficult.

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References