Comparison of simprevir versus non-simprevir containing anti-HCV treatment protocols; Single center experience

Eman Rewisha, Maii Abuzeid, Ayman Alsebaey, Nashwa Shebl,

Hepatolgy department, National Liver Institute, Menoufia University, Egypt.

BACKGROUND: HCV is a leading cause of liver cirrhosis with increased morbidity and mortality. Sofosbuvir (SOF) was a breakthrough in current HCV treatment. **AIM:** is compare sustained virological response (SVR) after SOF and simprevir (SMV) including treatment protocols before the availability of NS5A inhibitors in Egyptian Market. **METHODS:** Patients (n=2877) with either chronic hepatitis C or early compensated cirrhosis (Child Pugh A and B) were enrolled. Patients with, non-illegible pegylated interferon/ribavirin (PegINF/RBV) administration, elevated liver enzymes more than 5 folds, advanced cirrhosis were excluded. All patients underwent liver function tests, CBC, INR, abdominal ultrasonography, Fibroscan® and HCV PCR. Twelve weeks (w) PegINF/SOF/RBV (n=254; 8.8%), 24w SOF/RBV (n=273; 9.5%), 12w SOF/simprevir/RBV (n=2323; 80.7%) and 24 SOF/SMV/RBV (n=27; 0.9%). Totally SMV was given in 2350 (81.7%) patients. Negative PCR at week 4 is rapid virological response (RVR) while 12 weeks post end of treatment is SVR. **RESULTS:** Patients achieved HCV SVR ($p<0.05$) were younger [52(15) vs.55 (9) years], non-F4 fibrosis (82.9%), non-diabetics (83.1%), achieved RVR (91.8%), with higher serum albumin (4.08±0.6 vs. 3.8±0.54 g/dL), platelets (184.8373.09 vs. 138.86±69.74×10^3 µL) unlike serum bilirubin (0.84±0.45 vs. 1.09±0.6 mg/dL). HCV SVR was higher in SMV included protocols (83 vs.17%; p=0.0001). In depth HCV SVR was as following; PegINF/SOF/RBV (8.5%), SOF/RBV (8.4%), 12w SOF/SMV/RBV (82.1%) and 24w SOF/SMV/RBV (1%). Predictors of SVR (odds; 95% C.I) were age (1; 0.943-0.983), body mass index (0.9; 0.903-0.998), serum bilirubin (0.5; 0.392-0.675), serum albumin (1.7; 1.355-2.210), platelets (1; 1.008 - 1.015), non-diabetics (1.9; 1.226-3.002), not having HCC (5.1; 1.122-23.464), nonF4 fibrosis (2.4; 1.559-3.673) and RVR

(2.8; 1.673-4.624). **CONCLUSION:** Simprevir is an efficient anti-HCV drug.