

Background

People with hepatitis C virus (HCV) infection may have a high mortality due to it, which adds to the mortality from other causes that increases with age. The discovery of DAAs has radically changed the world scene of hepatitis C infection and its associated morbidity and mortality. The main advantage of the new DAAs-based antiviral regimens is the achievement of high sustained viral response rates for all HCV genotypes within a short treatment period, together with the infrequent occurrence of side effects, usually of mild grade. It is expected that complete HCV elimination will improve the prognosis of liver disease (reduce incidence if cirrhosis, rate of liver decompensation and HCC development) and reduce associated mortality.

Objectives

The aim of this study is to analyze all-cause mortality (related to HCV) in people with HCV infection by trying to identify predictors of mortality in a cohort of patients diagnosed with HCV infection in Navarre between 2015 and 2016.

Material/Methods

Epidemiological variables (age, sex), microbiological (co-infection with HIV, sustained viral response, spontaneous remission), DAA treatment, liver disease variables (cirrhosis and degree of cirrhosis, hepatocarcinoma) were studied. As well as, diagnosis of decompensated cirrhosis (encephalopathy, portal hypertension, esophageal varices, ascites, hepatorenal syndrome), and liver transplantation.

Mortality was analyzed in the years 2014 and 2015 in the cohort of people with HCV diagnosis in Navarre, Spain. Logistic regression models were used to identify factors associated with mortality.

Bibliography

- Mortality in hepatitis C patients who achieve a sustained viral response compared to the general population. Innes H. et al. *J Hepatol.* 2017;66:19-27.
- Future of liver disease in the era of direct acting antivirals for the treatment of hepatitis C. Ponziani FR et al. *Direct acting antivirals for the treatment of hepatitis C.* *World J Hepatol* 2017. March 8; 9(7):352-367

Results

The cohort included a total of 4143 people. In table 1 are displayed characteristics of each group of patients included in the analysis. Mortality of patients with HCV infection in 2014 was 1.7% (87 patients) and 2.2% (108 patients) in 2015. Mortality increased progressively with age with an OR: 40.85 in those over 85 years of age compared to younger than 45 years (95% CI: 12.59-132.54) (table 2). Factors that decrease the risk of mortality: women (OR: 0.49; 95% CI: 0.28-0.88), and viral cure either in response to antiviral treatment (OR: 0.14; 95% CI: 0.02-1.05) or spontaneous remission of viral load (OR: 0.16; 95% CI: 0.02-1.15) and hepatic transplantation (OR: 0.17; 95% CI: 0.03-0.91) (table 2). On the contrary, in addition to age, decompensated cirrhosis (OR: 8.9; 95% CI: 4.58-17.31) and hepatocarcinoma (OR: 7.45; 95% CI: 2.75-20.23) are factors associated with increased risk of mortality in patients diagnosed with HCV. By controlling for the remaining factors, mortality implied a decrease in 2015 compared to 2014 (OR = 0.86, 95% CI 0.83-1.39) (table 2).

Table 1. Main patients characteristics (per year)

	Mortality 2014	Mortality 2015
Anti-HCV+		
Positive viral load	27 (4,3%)	2 (1,6%)
Sustained viral response	246 (38,7%)	33 (27,3%)
Cirrhosis	17 (2,7%)	3 (2,5%)
Decompensated cirrhosis	54 (8,5%)	10 (8,3%)
Hepatocarcinoma	12 (1,9%)	2 (1,6%)
Hepatic transplantation	139 (21,9%)	41 (33,9%)

Table 2. Multivariable mortality analysis

	OR	IC 95%
Female vs male	0,49	0,28-0,88
48-54 vs <45 years	2,24	0,84-5,99
55-64 vs <45 years	2,77	0,93-8,28
65-74 vs <45 years	4,8	1,45-15,83
75-84 vs <45 years	14,556	4,86-43,68
>84 vs <45 years	40,85	12,59-132,54
HIV+	1,52	0,76-3,05
SVR post-treatment vs VL+	0,14	0,02-1,05
Spontaneous remission vs VL+	0,16	0,02-1,15
2015 vs 2014	0,86	0,53-1,39
Decompensated cirrhosis	8,9	4,58-17,31
Hepatocarcinoma	7,45	2,75-20,23
Hepatic transplantation	0,17	0,03-0,91

SVR: sustained viral response; VL: viral load

Conclusions

- In our study, age, decompensated cirrhosis and hepatocarcinoma are factors associated with increased risk of mortality while hepatic transplantation, women and viral cure are protective factor of mortality in patients diagnosed with HCV.
- Although the aging of the infected population and the progression of infection tend to raise the mortality of patients with hepatitis C, the new treatments open the door to be able to reverse this trend.