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HCC DEVELOPMENT IN HCV PATIENTS AFTER DAA: THE EXPERIENCE OF THE SCOLTA PROJECT

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ABSTRACT

Background

Interferon (IFN)-free direct antiviral agents (DAAs) effectively eradicate hepatitis C virus (HCV) and rapidly improve liver residual functions.

Recent data have suggested that hepatocellular carcinoma (HCC) risk increases during and after DAAs treatment, in HCV-infected patients with advanced liver disease, but no strong evidence exists.

Methods

The SCOLTA (Surveillance Cohort Long-Term Toxicity of Antiretrovirals/Antivirals)-HCV project is an observational, prospective, multicenter cohort study enrolling patients, either HCV mono- or HIV/HCV co-infected, who started DAA treatment. For HCV treatment and HCC surveillance, patients were followed according to Italian guidelines.

Results

Overall 1,154 pts were included in this study. Males were 69.2%; median age was 56.2 years. HIV/HCV co-infected were 392 (34.0%). Twenty-nine (2.5%) patients had a history of HCC (24, 3.2%, with HCV and 5, 1.3%, with HCV/HIV).

At the time of this analysis, median follow-up from initiation of DAA therapy was 16.7 months (IQR 12.7-19.4). Twenty-seven patients developed HCC, as a first diagnosis in 21 cases and recurrence in 6; the incidence rate/100 patient-years was 1.44 (95% CI 0.92-2.16) and 16.61 (95% CI 6.73-34.55) respectively. HCC was diagnosed during DAA treatment in 10 patients (8 new diagnoses and 2 recurrences). All recurrences occurred in HCV mono-infected patients (5 with SVR 12 and 1 with relapse).

Among 21 subjects with first HCC diagnosis, 4 were co-infected with HIV: the rate ratio in comparison with HCV mono-infected patients was 0.43 (95% CI 0.13-1.22, p=0.12). In a multivariate Cox model including age, sex, Metavir, HIV co-infection, HCV genotype, and outcome at 12 weeks, age (HR 1.06, 95% CI 1.01-1.12, by 1 year) and Metavir F4 (HR 4.70, 95% CI 1.08-20.44 as compared to F0-F3) were significantly associated to HCC.

Conclusions

In untreated historical controls, HCC incidence rate ranged between 1 and 3/100 patient-years. Our findings indicate that, in cirrhotic patients, the incidence rate of HCC during the first 16 months following initiation of DAA therapy is not different from that expected in untreated patients.

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Table 1.
Characteristics of 1155 patients on DAA treatment in the SCOLTA Cohort.

Variable	N (%)
Mean age (SD)	56.2 (10.8)
Males	799 (69.2)
Genotype	
1a	288 (25.0)
1b	402 (34.8)
2	89 (7.7)
3	213 (18.5)
4	162 (14.0)
Metavir	
F0-F3	428 (37.1)
F4	726 (62.9)
Previous diagnosis of HCC	29 (2.5)
HIV positive	392 (34.0)
DAA	
SOF+SIM	277 (24.1)
SOF+LED	227 (19.7)
3D	210 (18.3)
SOF+RIBA	183 (15.9)
SOF+DAC	171 (14.9)
2D	56 (4.9)
SIM+PEG	22 (1.9)
SIM+DAC	4 (0.4)
Outcome at 12 wks	
SVR 12	999 (93.7)
Failure	13 (1.2)
Relapse	44 (4.1)
Interruption	10 (0.9)
HCC diagnosis	27 (2.4)
-during DAA treatment	10 (0.9)
-after DAA treatment	17 (1.5)
-recurrence (n=29)	6 (20.7)
-new diagnosis (n=1125)	21 (1.9)

Results

Overall 1,154 pts were included in this study (table 1)
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Twenty-nine (2.5%) patients had a history of HCC (24, 3.2%, with HCV and 5, 1.3%, with HCV/HIV).

At the time of this analysis, median follow-up from initiation of DAA therapy was 16.7 months (IQR 12.7-19.4).

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Figure 1

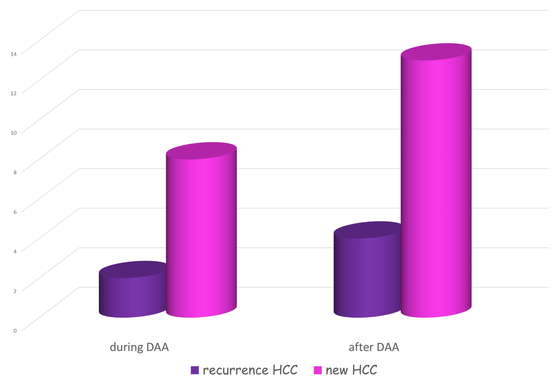


Figure 3

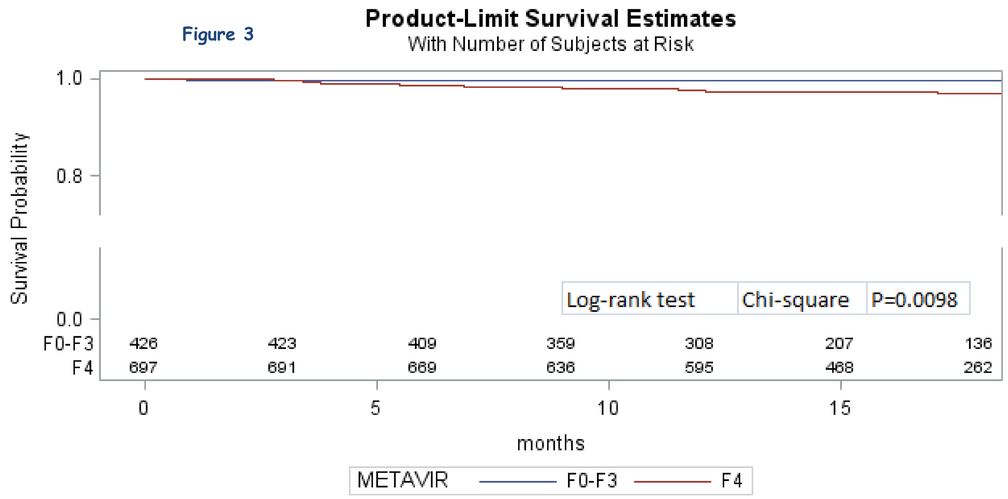
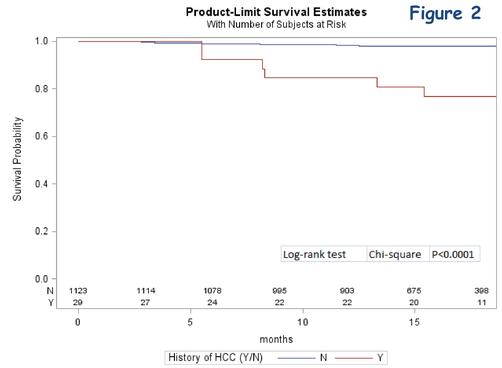


Figure 2



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