Poster # 762

Liver stiffness according to outcome of therapy with interferon plus ribavirin (sustained virologic response, relapse, nonresponse) in patients coinfected with HIV and HCV

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Background

- We have shown that sustained viral response (SVR) following therapy with interferon plus ribavirin (IFN-RBV) had better outcomes than both end-of-treatment response with subsequent relapse (REL) and no response (NR)[1]
- We also showed that REL was associated with less liver-related mortality and liver decompensation than NR[2]

1. Berenguer, J. et al. Hepatology 2009;50:407-413
2. Berenguer J et al. 50th ICAAC, 2010 Boston V-1784

Objective

- To assess liver stiffness (LS) by transient elastography (TE) after IFN-RBV in patients with SVR, REL, and NR.

Design and Patient Selection

Cohort Description
- Ambispective cohort of HIV/HCV+ patients who started IFN-RBV between Jan 2000 and Jan 2008
- 19 clinical centers in Spain
- Centralized online CRF (monitored).
- FU (every 6 mo): survival, liver decompensation, HIV-progression, ART & labs (CD4⁺ cells, HIV-VL, HCV-RNA), Liver biopsies (if any), and TE (if any).
- In cirrhotics: AFP and US scan

Patient Selection
For this study we selected patients with all the following
•Pretreatment liver biopsy (LB)
•TE measurement after finalization of IFN-RBV RX
•No anti-HCV retreatment

Study Duration
- From IFN-RBV discontinuation to the last TE measurement.

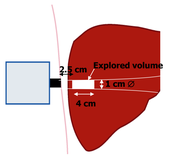
Censoring Date
- July 31, 2010

Categories of Response

- Sustained viral response (**SVR**): Undetectable serum HCV-RNA level 24 weeks after discontinuation of therapy
- Viral relapse (**REL**): Undetectable serum HCV-RNA level at the end of programmed therapy (48 weeks), with subsequent relapse;
- No response (**NR**): When patients not fulfilled SVR nor REL criteria

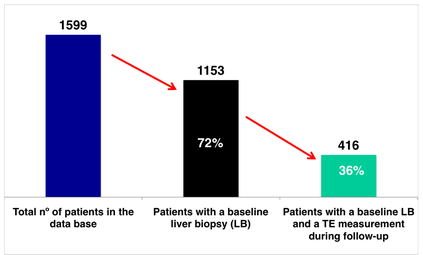
Transient Elastography

- TE was performed using a FibroScan® device (EchoSens, Paris, France).
- A median value, expressed in kilopascals (kPa), of 10 successful acquisitions was considered the representative measurement of liver stiffness.
- We considered 10 acquisitions with a success rate of at least 60% and an interquartile range (IQR) lower than 30% as representative measurements.
- Cut-off values for each stage of fibrosis*
  - ✓ Minimal fibrosis (F0-F1) : TE < 7.1 kPA
  - ✓ Moderate fibrosis (F2): TE ≥ 7.1 and < 9.5
  - ✓ Advanced fibrosis (F≥3): TE ≥ 9.5
  - ✓ Cirrhosis (F4): TE ≥ 14.5



** Castera L, et al. J Hepatol 2008; 48: 835 - 847*

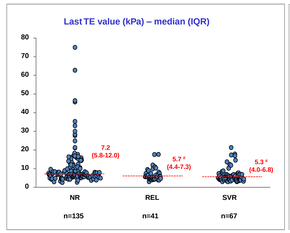
Patients Included in the Study

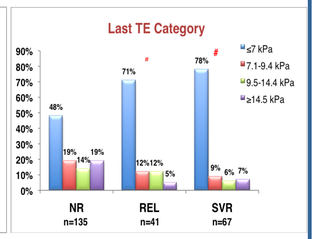


Patients Characteristics

Characteristic	Patients (N = 416)
Male sex-n (%)	302 (73)
Age-yr, median (IQR)	41 (37-44)
Prior injection drug use-n (%)	348 (84)
CDC category C-n (%)	95 (23)
CD4 cells baseline-n/mm3, median (IQR)	357 (244-489)
HAART during HCV treatment-n (%)	311 (75)
HIV RNA ≤ 50 copies/mL baseline-n (%)	275 (69)
HCV genotype 1-4-n (%)	303 (74)
HCV RNA ≥ 500,000 IU/mL	249 (70)
Advanced liver fibrosis (F3-F4 METAVIR) -n (%)	173 (42)
Anti-HCV therapy-n (%)	
Non-Peg IFN α2a – α2b + RBV	44 (11)
Peg IFN α2a – α2b + RBV	372 (89)
Response to anti-HCV therapy-n (%)	
Sustained viral response (SVR)	110 (26)
Viral relapse (REL)	65 (16)
No response (NR)	241 (58)

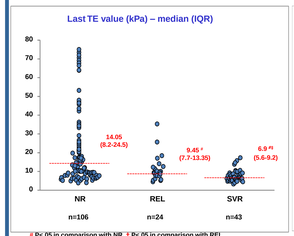
TE results for patients with baseline F0-F2

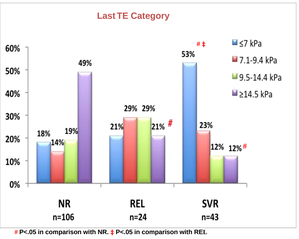




LB with F0-F2	NR N=135	REL N=41	SVR N=67
F0, F1, F2 – n (%)	15 (11), 56 (42), 64 (47)	6 (15), 17 (41), 18 (44)	8 (12), 27 (40), 32 (48)
Δt (mo) to last TE – median (IQR)	58.5 (41.9-80.2)	52.5 (32.6-63.8)	54.2 (32.7-71)

TE results for patients with baseline F3-F4





LB with F3-F4	NR N=106	REL N=24	SVR N=43
F3, F4 – n (%)	75 (71), 31 (29)	19 (79), 5 (21)	34 (79), 9 (21)
Δt (mo) to last TE – median (IQR)	55.5 (39.2-75.0)	48.6 (38.3-70.6)	56.5 (34.6-73.2)

Conclusions

- Our results show that sustained viral response after IFN-RBV was followed by less liver stiffness than both end-of-treatment response with subsequent relapse and no response.
- However, end-of-treatment response with subsequent relapse was associated with less liver stiffness than no response.
- These results, based on a noninvasive method for assessment of liver fibrosis, are consistent with clinical endpoints reported previously by our group.

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