Mental Health Impact of HCV Treatment in HIV/HCV Patients: DAA vs. IFN-based therapy

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BACKGROUND

- IFN-induced depression during Hepatitis C treatment is a well described entity affecting one in four patients (1).
- HIV/HCV coinfected patients are particularly vulnerable given the high prevalence of psychiatric comorbidities.
- Effect of DAA-only treatment on mental health has not previously been described.

OBJECTIVE

To evaluate treatment-induced depression as a complication of HCV-therapy in both IFN-based and DAA-only regimens.

METHODS

- Beck's Depression Inventory (BDI) scores were used to score the severity of depression.
- BDI scores were retrospectively analyzed from three phase II-III clinical trials in HIV/HCV coinfected patients.
  - 26 patients treated with 48 weeks IFN-based regimens
  - 50 patients treated with 12 weeks of ledipasvir/sofosbuvir combination (DAA)
- BDI scores were collected at pre-treatment day 0, during treatment and 1-8 weeks post-treatment.
- GraphPad Prism 6.0 was used for all statistical analysis.

Reference (1) M. Udina et al, *J.Clin.Psychiatry 73 (8):1128-1138, 2012.*

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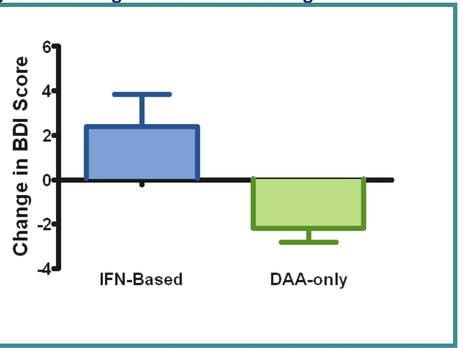
RESULTS

Table 1 – Baseline Characteristics

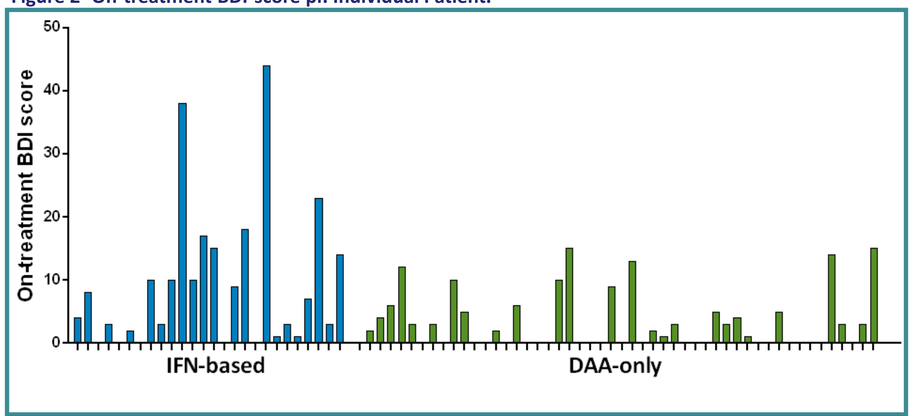
Baseline Characteristics		IFN-based treatment N=26	DAA-only treatment N=50
		N (%)	
Age (median)		47	58
Male		22 (84)	37 (74)
Black		11 (42)	42 (84)
Fibrosis	0-1	10 (38)	35 (70)
	2-4	16 (62)	15 (30)
SVR		13 (50)	49 (98)

Figure 1 – Change in BDI Scores During Treatment



BDI scores in patients who received IFN-based therapy (blue) increased 2.4 points (SEM ± 1.5) compared to baseline, while BDI scores in those receiving DAA-only treatment (green) decreased 2.2 points (SEM ± 0.6), representing a difference in BDI change (p=0.0011, 95% CI -7.266 to -1.903).

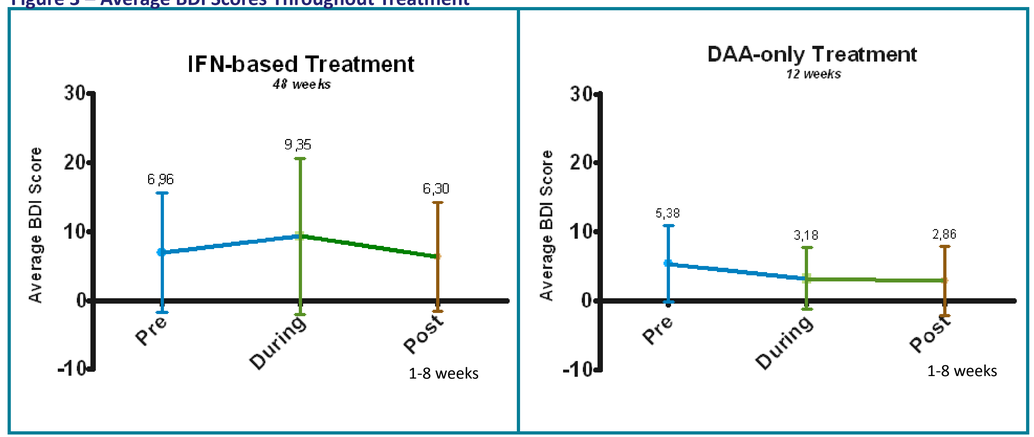
Figure 2- On-treatment BDI-score pr. Individual Patient.



DAA-based therapy patients in blue (n=50) and IFN-based therapy in green (n=26)

RESULTS

Figure 3 – Average BDI Scores Throughout Treatment



RESULTS

- There were similar baseline BDI scores between patients on IFN-based (6.96) and DAA-only (5.38) treatment (p=0.34).
- Mean on-treatment scores varied significantly between IFN-treated patients (9.35) and DAA-treated patients (3.18), p=0.0011.
- While post-treatment BDI scores returned to baseline for those on IFN-therapy, DAA-treated patients demonstrated a significant decline in post-treatment BDI-scores compared to baseline.
- In evaluating change in BDI-score during treatment: IFN-based scores increased by average 2.4 points, while DAA-only scores decreased by an average of 2.2 (FIGURE 1), demonstrating a significant difference, p=0.001.

CONCLUSION

- Contrary to IFN-based treatment, DAA-only treatment is not complicated by depression, and may be the optimal choice for patients with baseline psychiatric comorbidities.
- The reason for continued decline in post-treatment BDI-scores in DAA-treated patients is not clearly understood.
- Further analysis is underway to determine potential mechanisms including HCV clearance or medication effect on viral neurotropism.

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