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

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ABSTRACT #2091865

**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.

**RESULTS**

- IFN-based treatment N=26 & DAA-only treatment N=50

<table>
<thead>
<tr>
<th>Baseline Characteristics</th>
<th>IFN-based</th>
<th>DAA-only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (median)</td>
<td>47</td>
<td>58</td>
</tr>
<tr>
<td>Male</td>
<td>22 (84)</td>
<td>37 (74)</td>
</tr>
<tr>
<td>Female</td>
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<td>42 (84)</td>
</tr>
<tr>
<td>Black</td>
<td>10 (38)</td>
<td>35 (70)</td>
</tr>
<tr>
<td>Fibrosis</td>
<td>16 (62)</td>
<td>15 (30)</td>
</tr>
<tr>
<td>SVR</td>
<td>13 (50)</td>
<td>49 (98)</td>
</tr>
</tbody>
</table>

**RESULTS**

**Figure 1** - Change in BDI Scores During Treatment

BDI scores in patients who received IFN-based therapy (BDI) increased 2.4 points (SEM: ± 3.5) 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: -2.986 to -1.301).

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

**Figure 3** - Average BDI Scores Throughout Treatment

- 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 neuropathism.

**REFERENCES**