Hepatitis C treatment in a primary care clinic in the high HCV burden setting in Karachi, Pakistan

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1. Background
- The burden of hepatitis C infection (HCV) in Pakistan is among the highest in the world with national HCV prevalence reported to be 4.9%.
- In 2016, access to DAA has improved in Pakistan, in particular with the availability of Daclatasvir.
- This pangenotype treatment option allows simplification of testing treatment and care.

2. Methods
- Patients were screened for HCV according to WHO 2014 guidelines.
- HCV was confirmed by presence of HCV RNA.

3. Results

Study population – characteristics at enrolment

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<thead>
<tr>
<th>Characteristics at enrolment</th>
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<th>Characteristics at enrolment</th>
<th>Statistic</th>
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</thead>
<tbody>
<tr>
<td>Number of patients enrolled</td>
<td>2811</td>
<td>HbA1C positive n (%)</td>
<td>31 (1.1)</td>
</tr>
<tr>
<td>Age (years), median (IQR)</td>
<td>40.0 [31.0-50.0]</td>
<td>HIV co-infected n (%)</td>
<td>8 (0.3)</td>
</tr>
<tr>
<td>Apri score n (%)</td>
<td>0.6 – 2</td>
<td>Genotype 4/4 (%)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>0.6/6.5</td>
<td></td>
<td>1</td>
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<td>&gt; 2</td>
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<td>1</td>
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Risk factors at enrolment

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>n/N* (%)</th>
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<tbody>
<tr>
<td>History of injections at unregistered clinics</td>
<td>444/1210 (36.7)</td>
</tr>
<tr>
<td>History of invasive medical procedures</td>
<td>227/1209 (18.8)</td>
</tr>
<tr>
<td>History of blood transfusion</td>
<td>1042/1217 (85.6)</td>
</tr>
<tr>
<td>Health care worker</td>
<td>17/2081 (1.4)</td>
</tr>
<tr>
<td>Prisoner</td>
<td>40/4181 (2.8)</td>
</tr>
<tr>
<td>Partner with HCV positive status (current)</td>
<td>126/705 (17.9)</td>
</tr>
<tr>
<td>Partner with HCV positive status (past)</td>
<td>98/705 (14.1)</td>
</tr>
</tbody>
</table>

Distribution of patients enrolled per sex and age category

- Genotype 3 was the most prominent (86.7% of the test done), followed by genotype 1 and 2.
- 64.4% of the patients had APRI score greater than 0.5, meeting the criteria to start treatment.
- Females represented almost two thirds of patients.
- History of blood transfusion (85.6%) and history of injections at unregistered clinics were the most common risk factors (36.7%).
- Around 25% of the patients had partners with HCV positive status (current and past).
- 849 patients initiated treatment, 378 on Sofosbuvir / Daclatasvir, 446 on Sofosbuvir / Ribavirin, 24 on Sofosbuvir / Ribavirin / Peg-Interferon and 1 on Sofosbuvir / Daclatasvir / Ribavirin.

APRI score was used to prioritize initiation of treatment (> 0.5).
- Eligible patients were treated with 12 or 24 weeks of Sofosbuvir and weight-based Ribavirin until Daclatasvir-based regimen were introduced in October 2016.
- Patients were tested for genotype until pangenotype treatment was introduced.
- HCV viral load (VL) was measured at baseline and 12 weeks after treatment completion.
- Treatment was initiated and followed up by general practitioners in the primary care clinic.
- Data was collected under routine programme conditions and was entered in Hepa-MuDud (Hepatitis Multicentric Database, Epicentre, Paris).
- Systematic collection of risk factors was implemented in April 2016, using MSF-Epicentre standardized case report forms.
- Patients not seen for 60 days after last date of next appointment were defined as lost to follow-up (LFU).
- Data presented covered the period January 2015 to April 2017.

APRIL 2021

Cascade analysis for patients that were initiated on treatment (all regimen, patients that were re-treated were counted twice)

- 91% (323 out of 354) of the patients that were exited of program were cured.
- 12 patients failed, all on Sofosbuvir / Ribavirin. 2 patients were retreated with Sofosbuvir / Daclatasvir / Ribavirin and 1 on Ribavirin and Sofosbuvir / Ledipasvir / Ribavirin.
- 2 patients died before completion of treatment, 1 from hepatocarcinoma (possibly related to treatment) and 1 from cerebro vascular accident (not related to treatment).
- 29 patients were LFU before end of treatment and 19 were LFU after end of treatment giving an overall LFU rate of 5.6% for patients ever initiated on treatment.

4. Conclusion
- Interim results suggest feasibility of the CHC treatment delivery at the primary care within the affected community, using simplified diagnostic and treatment algorithms.
- LFU level will have to be investigated in order to maintain a high cured rate in the program.

5. Acknowledgment
We thank MSF staff on the field, and the MSF partners in the Ministry of Health of Pakistan at local and national levels.