Prisoners treated for hepatitis C with protease inhibitor, New York, USA, 2012

Harish Moorjani, Emory University
Carl Koenigsmann, Emory University
Min Jung Kim, Emory University
Anne C Spaulding, Emory University

Journal Title: Emerging Infectious Diseases
Volume: Volume 21, Number 1
Publisher: Centers for Disease Control and Prevention (CDC) | 2015, Pages 186-188
Type of Work: Article | Final Publisher PDF
Publisher DOI: 10.3201/eid2101.141025
Permanent URL: https://pid.emory.edu/ark:/25593/msw7v

Final published version: http://dx.doi.org/10.3201/eid2101.141025

Accessed June 8, 2020 6:51 PM EDT
to phenotypic traits. Because changes in the 5′ untranslated region have the potential to affect the rate of replication (8–10), it is possible that minor genome changes are responsible for the rapid spread and high severity of disease in 2014. Correlation between clinical features of patients in conjunction with additional genomic analysis might provide further insight into the pathogenetic determinants of this strain. Therefore the genome sequence of EV-D68 determined from the 2014 outbreak in St. Louis, Missouri, provides a resource for tracking and genomic comparison of this rapidly spreading virus.

Acknowledgments
We thank Stephanie Bledsoe for her assistance with obtaining samples from the virology laboratory at St. Louis Children’s Hospital and Maria Cannella and Sheila Mason for their assistance with PCR assays. We thank The Genome Institute staff for their assistance with sequencing and data submission, particularly Lucinda Fulton, Debbie Moeller, Joanne Nelson, Sean McGrath, and Amy Ly.

This work was funded by the Alan A. and Edith L. Wolff Distinguished Professorship (to R.K.W.) and R01AI097213 (to G.A.S.).

References
form agreeing to the medication, participate in laboratory monitoring, and attend primary or specialty clinic follow-up appointments; 3 refusals of any program component in any combination would result in medication discontinuation. Because referring physicians conducted the initial screening of potential participants, the exact number of patients screened cannot be determined. The most frequent factor for ineligibility was uncontrolled psychiatric disease.

Facilities were encouraged to treat ≤5 patients at any given time. Staff physicians, mid-level providers, nurses, pharmacists, and social workers participated in extensive training. Telaprevir was administered with a fat supplement by directly observed therapy. Patients waited in lines every 7–9 hours to receive the medications. All patients received antihistamine prophylaxis before therapy was initiated. Patients received containers of high potency topical steroid creams at the initiation of treatment with instructions to start applying it 2 times daily at the first sign of a rash. The nurses questioned the patients about rash and pruritus during each weekly interferon injection appointment. The infectious disease consultant conducted follow-up visits by telemedicine, using video and audio equipment for remote monitoring and supervision of treatment.

Among the 50 patients who began therapy, 38 (76%) were naïve to any treatment, 7 (14%) were experiencing relapses, 4 (8%) had responded partially to prior treatment, and 1 (2%) had not responded to prior treatment. Ages of the patients ranged from 21 to 67 years. All 50 treated patients experienced rash, pruritus, or both. All but 1 patient (98%) experienced fatigue. Anemia was detected in 68%, yet none received erythropoietin. Rather, the infectious disease consultant aggressively reduced ribavirin doses. Because of difficult-to-access, paper-based recording of dosing, determining the mean dose of ribavirin used in each patient was not feasible. None required transfusions. Thrombocytopenia developed in 2 patients. In 64%, neuro-psychiatric effects were observed. Of 50 patients, 2 (4%) dropped out of the program. As shown in the Table, 44 (88%) experienced a sustained viral response.

By using the most effective agents available to treat hepatitis C, correctional health care systems can make a unique contribution to public health (5). Despite the substantial side effects of the first direct acting agents, the NYDOCCS health care personnel observed and reported a sustained viral response in a select group of patients which exceeded that seen in the drug registration trials (6). Recruiting a multidisciplinary health care team facilitated administration of a cumbersome regimen. Prophylactic treatment for rash and ribavirin dose reductions in 68% may have minimized dermatologic side effects. Mandatory patient education may have enhanced patient motivation to adhere to the protocol. As shown previously, telemedicine was a valuable tool in hepatitis C management of prisoner-patients (7).

<table>
<thead>
<tr>
<th>Outcome</th>
<th>No. (%) prisoners</th>
<th>Metavir staging of fibrosis, no. (%) prisoners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disenrolled</td>
<td>2 (4)</td>
<td>1 (2) – 9 (11)</td>
</tr>
<tr>
<td>Treatment failed</td>
<td>4 (8)</td>
<td>2 (5) – 2 (22)</td>
</tr>
<tr>
<td>Sustained viral response</td>
<td>44 (88)</td>
<td>38 (93) – 6 (67)</td>
</tr>
<tr>
<td>Early rapid viral response</td>
<td>34 (68)</td>
<td>31 (76) – 3 (33)</td>
</tr>
<tr>
<td>Total</td>
<td>50 (100)</td>
<td>41 (82) – 9 (18)</td>
</tr>
</tbody>
</table>

*Treatment consisted of telaprevir, pegylated interferon, and ribavirin.

References

LETTERS


Address for correspondence: Anne C. Spaulding, Rollins School of Public Health, Department of Epidemiology, 1518 Clifton Rd, Room 3033, Atlanta, GA 30322, USA; email: ASpauld@emory.edu

Correction: Vol. 20, No. 3

The name of author Magnus Rasmussen was misspelled in the article Septic Arthritis Caused by Streptococcus suis Serotype 5 in Pig Farmer (C. Gustavsson, M. Ramussen). The article has been corrected online (http://wwwnc.cdc.gov/eid/article/20/3/13-0535_article).