Outpatient Intensive Induction Chemotherapy for Patients with Acute Myeloid Leukemia During the Time of COVID-19 and Beyond

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Setting

- Academic Comprehensive Cancer Center in Seattle during the COVID-19 pandemic.
- The COVID-19 pandemic caused an unprecedented strain on the medical system.
- The shortage of inpatient beds at this academic cancer center necessitated the decision between admitting new Acute Myeloid Leukemia (AML) patients or initiating induction chemotherapy in the outpatient setting.
- Advanced Practice Provider managed, interdisciplinary, outpatient induction chemotherapy program was initiated.

Data

<table>
<thead>
<tr>
<th>Patient</th>
<th>Chemo Regimen</th>
<th>Length of Regimen in days</th>
<th>Absolute Peripheral Blast Count on Day 1</th>
<th>TRM Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient 1</td>
<td>FLAG-IDA plus Gilteritinib</td>
<td>5</td>
<td>9.75</td>
<td>1.449</td>
</tr>
<tr>
<td>Patient 2</td>
<td>7+3</td>
<td>7</td>
<td>0.32</td>
<td>0.325</td>
</tr>
<tr>
<td>Patient 3</td>
<td>GCLAM plus midostaurin</td>
<td>5</td>
<td>0.13</td>
<td>3.99</td>
</tr>
</tbody>
</table>

Methods

- AML and infusion APPs collaborated and followed the guidelines published by Becker et al.
- Prior to beginning chemotherapy, a central catheter was placed and a MUGA scan was obtained.
- During chemotherapy, the patients were assessed daily in the outpatient infusion center by their primary APP.
- Daily CBC, PT/INR, CMP, fibrinogen, LDH, uric acid were obtained.
- Support was also provided by infusion APP staff.
- All APPs had been trained to recognize chemotherapy-related complications and to arrange timely hospital admissions for complications.

Results

- The patient receiving 7+3 completed 5 out of 7 days outpatient.
- The other two patients completed 1 out of 5 and 2 out of 5 days of outpatient induction chemotherapy respectively.
- Two were admitted for disseminated intravascular coagulation and one for neutropenic fever.
- All three chemotherapy regimens were completed in the inpatient setting as prescribed, except for one 5-hour delay.
- All patients were discharged from hospital; the 30-day mortality was zero.

Conclusion

- This APP run program suggested that intensive induction chemotherapy can safely be administered to AML patients in the outpatient setting.
- This program was successful because the patients all resided within 30 minutes of the cancer center, each had a caregiver, and all were assessed as low risk for complications.
- This program should find wider use, even beyond the time of COVID-19.

Acknowledgements: