**Patient**: T.R. (DOB 1966-03-01)  
**MRN**: 683142  
**Admission**: 2024-03-05 | **Discharge**: 2024-03-22  
**Physicians**: Dr. J. Wilson (Hematology/Oncology), Dr. A. Gardner (ID), Dr. M. Lawrence (Nephrology)

**DISCHARGE DIAGNOSIS**

Acute Myeloid Leukemia (AML) with t(8;21), Favorable Risk, in Consolidation Cycle III

**ONCOLOGICAL DIAGNOSIS**

* **Primary**: AML, FAB M2 subtype with t(8;21)(q22;q22)/RUNX1-RUNX1T1
* **Diagnosed**: October 8, 2023
* **Histology**:
  + Bone marrow: Hypercellular (90%) with 45% myeloblasts
  + Immunophenotype: CD34+, CD117+, CD13+, CD33+, HLA-DR+, MPO+
  + Cytochemistry: MPO+, NSE-
* **Molecular/Cytogenetic**:
  + Karyotype: 46,XY,t(8;21)(q22;q22)[18]/46,XY[2]
  + FISH: RUNX1-RUNX1T1 fusion in 85% of cells
  + Molecular: RUNX1-RUNX1T1 transcript (9.2% at diagnosis)
  + NGS: KIT D816V mutation (VAF 15.3%); negative for FLT3-ITD, FLT3-TKD, NPM1, CEBPA, IDH1/2
* **Risk Classification**: ELN 2022 Favorable Risk (based on t(8;21) despite KIT mutation)

**CURRENT TREATMENT**

**Consolidation Cycle III with High-Dose Cytarabine (HiDAC)**

* Cytarabine 3,000 mg/m² IV over 3 hours, q12h on Days 1, 3, 5 (March 6-10, 2024)
* **Premedications**:
  + Dexamethasone ophthalmic 0.1% drops, 2 drops in each eye QID
  + Ondansetron 16 mg IV prior to each cytarabine dose
  + Dexamethasone 12 mg IV prior to each cytarabine dose

**TREATMENT HISTORY**

**Induction (November 1-7, 2023)**

* 7+3+GO regimen:
  + Cytarabine 100 mg/m² continuous IV x 7 days
  + Daunorubicin 60 mg/m² IV x 3 days
  + Gemtuzumab ozogamicin 3.0 mg/m² IV days 1, 4, 7
* Complications: Febrile neutropenia (Day +6)
* Response: CR with <1% blasts, MRD negative by flow, 3-log reduction in RUNX1-RUNX1T1

**Consolidation I (January 10-14, 2024)**

* HiDAC (3 g/m² IV q12h days 1, 3, 5)
* Complications: Grade 2 cytarabine dermatitis, Grade 2 mucositis
* Post-cycle MRD: RUNX1-RUNX1T1 transcript 0.01%

**Consolidation II (February 12-16, 2024)**

* HiDAC (3 g/m² IV q12h days 1, 3, 5)
* Complications: Grade 3 neutropenic fever (Day +9), Grade 2 mucositis
* Post-cycle MRD: RUNX1-RUNX1T1 transcript <0.01% (undetectable)

**COMORBIDITIES**

* Essential Hypertension (2018, controlled with amlodipine)
* Dyslipidemia (2019, managed with atorvastatin)
* Prediabetes (HbA1c 6.2% prior to AML diagnosis)
* History of tobacco use (20 pack-years, quit 2016)
* Obesity (BMI 32 kg/m²)
* Paroxysmal atrial fibrillation (on apixaban for stroke prevention)
* Allergies: Moxifloxacin (rash)

**HOSPITAL COURSE**

58-year-old male with favorable risk AML received Consolidation Cycle III with HiDAC (cytarabine 3 g/m² IV q12h on Days 1, 3, 5) with appropriate prophylaxis including dexamethasone eye drops, antiemetics, posaconazole antifungal prophylaxis, and hydration. Patient tolerated chemotherapy administration without immediate adverse reactions or infusion-related events. Cardiac monitoring showed no significant arrhythmias during cytarabine administration.

**Complications**:

* Day +5: Neutropenic fever (38.6°C, ANC 0.1 x 10⁹/L); blood cultures grew MSSE (contaminant); started on piperacillin-tazobactam; defervesced within 48 hours. Chest x-ray showed no infiltrates, and urine culture was negative.
* Day +7: Grade 2 mucositis requiring analgesics, IV hydration, and oral care protocol. Pain adequately controlled with oxycodone and magic mouthwash. No evidence of oral candidiasis or herpes stomatitis on examination.
* Transient renal dysfunction: Creatinine increased from baseline 0.9 mg/dL to peak 1.4 mg/dL (Day +6), improved with IV fluids. Urinalysis showed no evidence of intrinsic renal pathology. Nephrology attributed changes to pre-renal azotemia.
* Count nadir: WBC 0.3 x 10⁹/L (Day +7), ANC 0.0 x 10⁹/L (Days +6-8), Hgb 8.2 g/dL (Day +9), Platelets 12 x 10⁹/L (Day +10). No significant bleeding events during thrombocytopenia.

By Day +15, showed count recovery (ANC 0.5 x 10⁹/L) and improvement in mucositis. Remained afebrile >48 hours with adequate oral intake by discharge.

**DISCHARGE MEDICATIONS**

* Acyclovir 400 mg PO BID (continue through count recovery)
* Amlodipine 5 mg PO daily
* Atorvastatin 20 mg PO at bedtime
* Apixaban 5 mg BID
* Magic mouthwash 5-10 mL swish and spit QID PRN mouth pain
* Ondansetron 8 mg PO Q8H PRN nausea
* Oxycodone 5 mg PO Q6H PRN moderate pain
* Acetaminophen 650 mg PO Q6H PRN mild pain/fever

**FOLLOW-UP PLAN**

**Oncology**:

* Dr. J. Wilson in 1 week (03/29/2024) with CBC and bone marrow biopsy for MRD assessment
* Twice weekly CBC, CMP until count recovery, then weekly

**Treatment Plan**:

* Consolidation IV (final cycle) planned for early April 2024
* Total of 4 cycles HiDAC planned based on favorable risk profile
* No allogeneic stem cell transplantation indicated in first remission

**Monitoring Plan**:

* MRD monitoring with PCR for RUNX1-RUNX1T1: q3 months for year 1, q6 months for years 2-3
* Bone marrow with molecular MRD assessment 1 month after completion of consolidation

**Patient Education**:

* Monitor temperature twice daily, report fever ≥38.0°C immediately
* Neutropenic precautions: avoid crowds, hand hygiene, food safety
* Continue oral care regimen for mucositis
* Emergency contact information provided
* Detailed dietary instructions for adequate nutrition during recovery from mucositis, focusing on soft, bland, non-irritating foods
* Instructions on medication management, particularly regarding apixaban to prevent thrombosis during period of limited activity

**KEY LAB VALUES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **Admission** | **Nadir** | **Discharge** | **Reference** |
| WBC | 4.2 | 0.3 (D+7) | 2.3 | 4.0-11.0 x10⁹/L |
| ANC | 2.8 | 0.0 (D+6-8) | 1.7 | 2.0-7.0 x10⁹/L |
| Hgb | 11.5 | 8.2 (D+9) | 8.5 | 13.5-17.5 g/dL |
| Plt | 135 | 12 (D+10) | 142 | 150-400 x10⁹/L |
| Cr | 0.9 | 1.4 (D+6) | 1.1 | 0.7-1.3 mg/dL |
| CRP | 1.5 | 35 (D+5) | 8.5 | < 5 mg/L |
| Blasts | 0% | - | 1% | Negative |

**Electronically Signed**:  
Dr. J. Wilson (Hematology/Oncology)  
Dr. A. Gardner (Infectious Disease)  
Dr. M. Lawrence (Nephrology)  
Date: 2024-03-22