**Patient**: M.B. (DOB 1965-05-15)  
**MRN**: 795314  
**Admission**: 2025-03-10 | **Discharge**: 2025-04-02  
**Physicians**: Dr. K. Watanabe (Hematology/BMT), Dr. F. Nouri (Infectious Disease), Dr. S. Thompson (Gastroenterology)

**DISCHARGE DIAGNOSIS**

Mantle Cell Lymphoma, Stage IV (Status Post BEAM Conditioning and Autologous Stem Cell Transplantation)

**ONCOLOGICAL DIAGNOSIS**

* **Primary**: Mantle Cell Lymphoma (MCL)
* **Diagnosed**: September 2024
* **Histology**:
  + Right inguinal lymph node: monotonous proliferation of small to medium-sized lymphoid cells
  + IHC: CD20+, CD5+, cyclin D1+, SOX11+, CD10-, CD23-, BCL6-. Ki-67: 25%
  + FACS: CD19+, CD20+, CD5+, CD43+, FMC7+, CD23-, lambda light chain restriction
  + FISH: t(11;14)(q13;q32) translocation
  + NGS: TP53 wild-type, NOTCH1 and ATM mutations
  + Molecular: Mutated IGHV
* **Risk Stratification**:
  + MIPI: 6.2 (High Risk) [Age: 59 years, ECOG PS: 1, LDH: >1.5 × ULN, WBC: 15.2 × 10^9/L]
  + MIPI-c: 6.7 (High Risk) [including Ki-67: 25%]
  + Ann Arbor Stage IV (bone marrow and GI involvement)
* **Initial Staging**:
  + PET/CT: Extensive FDG-avid lymphadenopathy (max SUV 11.8), splenomegaly (16 cm)
  + Bone Marrow: 30% involvement, nodular and interstitial pattern
  + GI Endoscopy: Multiple lymphomatous lesions throughout colon, terminal ileum, and gastric antral nodularity with biopsy confirming MCL involvement
  + CSF: Negative for lymphoma involvement

**PREVIOUS TREATMENT**

* **Induction**: R-CHOP+Ibrutinib alternating with R-DHAP (3 cycles each, Sep 2024–Feb 2025)
* **Stem Cell Collection**:
  + Mobilization: G-CSF 10 μg/kg/day × 5 days
  + Apheresis: February 25-26, 2025
  + Collected: 6.2 × 10^6 CD34+ cells/kg
* **Response Assessment**:
  + Pre-transplant PET/CT: Complete metabolic response
  + Bone Marrow: MRD+ (0.01% by flow)
  + GI Endoscopy: Complete resolution

**CURRENT TREATMENT**

**BEAM Conditioning & ASCT**:

* BEAM regimen:
  + BCNU (carmustine) 300 mg/m² IV on day -6 (March 12, 2025)
  + Etoposide 200 mg/m² IV daily on days -5 to -2 (March 13-16, 2025)
  + Cytarabine 200 mg/m² IV q12h on days -5 to -2 (March 13-16, 2025)
  + Melphalan 140 mg/m² IV on day -1 (March 17, 2025)
* Stem cell infusion: 4.8 × 10^6 CD34+ cells/kg on day 0 (March 18, 2025)
* Cells cryopreserved: 1.4 × 10^6 CD34+ cells/kg

**Supportive Care**:

* G-CSF: Filgrastim 5 μg/kg SC daily from day +5 until engraftment
* Antimicrobial prophylaxis: Fluconazole, acyclovir
* Blood products: 2 units RBC, 4 units platelets

**Engraftment**:

* Neutrophil: Day +11 (March 29, 2025)
* Platelet: Day +14 (April 1, 2025)

**COMORBIDITIES**

* Ulcerative colitis (2012, in remission)
* Psoriasis (2016, well-controlled)
* Adult-onset asthma (2019, mild)
* Hereditary hemochromatosis (2017)
* Recurrent kidney stones (since 2015)
* History of TBI (2010, no deficits)
* Moderate bilateral hearing loss
* Allergies: Contrast dye (anaphylaxis), amoxicillin (urticaria), shellfish (angioedema)

**Pre-ASCT Evaluation**:

* Echocardiogram: LVEF 62%
* PFTs: FEV1 85%, DLCO 80%

**HOSPITAL COURSE**

59-year-old male with Stage IV MCL admitted for BEAM conditioning and autologous stem cell transplantation. Conditioning began on March 12 (day -6) and completed without major complications. Stem cells were infused on March 18 (day 0) without complications. Patient experienced expected toxicities:

* Grade 3 mucositis requiring opioid analgesia and TPN
* Grade 2 nausea/vomiting
* Grade 3 diarrhea
* Transient elevation of liver enzymes and bilirubin related to conditioning regimen

On day +7 (March 25), developed neutropenic fever (38.7°C, ANC 0.1 × 10^9/L). Blood/urine cultures obtained, started on meropenem. CT chest showed fungal pneumonia with bilateral ground-glass opacities and small nodular infiltrates in right lower lobe. Started on isavuconazole based on infectious disease recommendations. Became afebrile within 48 hours of appropriate therapy.

Neutrophil engraftment occurred on day +11 (March 29) with ANC >0.5 × 10^9/L for 3 consecutive days. Platelet engraftment (>20 × 10^9/L unsupported for 2 days) documented on day +14 (April 1).

TPN initiated on day +3 due to severe mucositis, discontinued on day +12 as oral intake improved. By discharge, mucositis significantly improved with adequate oral intake. Central line removed. Patient clinically stable, afebrile >72 hours, with improving blood counts.

**DISCHARGE MEDICATIONS**

**New Medications**:

* Acyclovir 400 mg PO BID (continue for 12 months)
* TMP-SMX DS 1 tablet PO 3×/week
* Amoxicillin/Clavulanate 875/125 mg PO BID (for 5 days)
* Isavuconazole 200 mg PO daily (for 6 weeks, then reassess)
* Pantoprazole 40 mg PO daily
* Ondansetron 4 mg PO q8h PRN nausea
* Paracetamol 500 mg PO q8h PRN pain

**Chronic Medications**:

* Mesalamine 2.4 g PO daily
* Calcipotriene 0.005% ointment BID
* Albuterol inhaler 2 puffs PRN
* Potassium citrate 10 mEq PO BID

**FOLLOW-UP PLAN**

**Immediate**:

* BMT clinic with Dr. Watanabe in 3 days (April 5)
* CBC twice weekly for 2 weeks, then weekly until day +100
* CMP weekly until day +100

**Response Assessment**:

* PET/CT and bone marrow biopsy with MRD assessment at day +100 (June 26)

**Maintenance Therapy**:

* Ibrutinib 560 mg PO daily for 2 years (begin day +90)
* Rituximab 375 mg/m² IV every 2 months for 3 years (begin day +90)

**Transplant Precautions**:

* Temperature monitoring twice daily
* Strict hand hygiene
* Low microbial diet for 3 months
* Avoid crowds/sick contacts for 3 months
* No gardening, construction sites, soil exposure for 3 months
* No swimming in lakes, ponds, public pools for 6 months
* No live pets for 3 months
* Wear mask in public until day +100

**Vaccination Schedule**:

* Inactivated vaccines: Begin 6 months post-transplant

**KEY LAB VALUES**

| **Parameter** | **Pre-Conditioning** | **Nadir** | **Discharge** | **Reference** |
| --- | --- | --- | --- | --- |
| WBC | 4.8 | 0.2 (3/24) | 3.2 | 4.0-11.0 × 10^9/L |
| ANC | 3.2 | 0.0 (3/22-28) | 2.1 | 2.0-7.0 × 10^9/L |
| Hemoglobin | 11.8 | 7.6 (3/27) | 9.2 | 13.5-17.5 g/dL |
| Platelets | 145 | 6 (3/25) | 32 | 150-400 × 10^9/L |
| Creatinine | 0.9 | 1.3 (3/19) | 1.0 | 0.7-1.3 mg/dL |
| Total Bilirubin | 0.8 | 2.4 (3/24) | 1.2 | 0.2-1.2 mg/dL |
| ALT | 32 | 68 (3/25) | 45 | 7-56 U/L |
| AST | 28 | 74 (3/25) | 38 | 8-48 U/L |
| Albumin | 4.0 | 2.8 (3/23) | 3.2 | 3.5-5.0 g/dL |
| CMV PCR | Negative | - | Negative | Negative |

**Electronically Signed**:  
Dr. K. Watanabe (Hematology/BMT)  
Dr. F. Nouri (Infectious Disease)  
Dr. S. Thompson (Gastroenterology)  
Date: 2025-04-02