**Patient:** William Foster (DOB 1978-10-10)  
**Medical Record Number:** 924635  
**Date of Admission:** 2025-03-25  
**Date of Discharge:** 2025-04-02  
**Admitting Physician:** Dr. N. Chen (Neuro-Oncology)  
**Consulting Physician:** Dr. V. Patel (Neurology)

**Discharge Diagnosis: Primary Central Nervous System Diffuse Large B-Cell Lymphoma**

**1. Detailed Oncological Diagnosis:**

Primary Diagnosis**:** Primary Central Nervous System Diffuse Large B-Cell Lymphoma (PCNSL)  
Date of Initial Diagnosis**:** January 12, 2025

Histology:

* Stereotactic brain biopsy (January 13, 2025) of right frontal lobe lesion revealed diffuse proliferation of large atypical lymphoid cells with prominent nucleoli and moderate amount of cytoplasm.
* Immunohistochemistry: Positive for CD20, CD79a, BCL2, BCL6, MUM1. Negative for CD3, CD5, CD10, cyclin D1, CD138, ALK-1. Ki-67 proliferation index: 80%.
* In situ hybridization: Negative for Epstein-Barr virus encoded RNA (EBER).
* Additional markers: MYC expression in 30% of cells. Double expressor status (MYC+/BCL2+) without gene rearrangements.
* Molecular studies: No MYD88 L265P mutation detected. IGH clonality studies confirmed monoclonal B-cell population.

Staging/Risk Stratification:

* International Extranodal Lymphoma Study Group (IELSG) Score: 2
  + Age > 60 years: No (Patient is 46) (+0)
  + ECOG performance status > 1: No (ECOG is 1) (+0)
  + Elevated LDH: Yes (LDH 265, >225) (+1)
  + Elevated CSF protein: No (CSF Protein 38) (+0)
  + Deep brain involvement: Yes (Left thalamic lesion) (+1)
* Memorial Sloan Kettering Cancer Center (MSKCC) Prognostic Score: Class 1 (Age < 50 years, KPS ≥ 70)

Imaging Studies:

* MRI Brain with contrast (January 10, 2025): Two enhancing lesions with surrounding edema – right frontal lobe (4.0 x 3.5 cm) and left thalamus (2.5 x 2.0 cm). No evidence of leptomeningeal enhancement.
* CT Chest/Abdomen/Pelvis (January 14, 2025): No evidence of systemic lymphoma or other malignancy.
* PET/CT (January 15, 2025): Hypermetabolic lesions corresponding to known brain lesions (SUVmax 18.2 right frontal, SUVmax 12.4 left thalamus). No evidence of systemic disease.
* Ophthalmologic exam with slit lamp (January 15, 2025): No evidence of ocular involvement.

Additional Diagnostic Studies:

* Cerebrospinal Fluid Analysis (January 14, 2025):
  + Cytology: Negative for malignant cells
  + Flow cytometry: No monoclonal B-cell population detected
  + Biochemistry: Protein 38 mg/dL (normal), Glucose 58 mg/dL, LDH 40 U/L
  + Cell count: 2 WBC/μL (normal), 0 RBC/μL
* Bone Marrow Biopsy (January 16, 2025): Normocellular marrow with no evidence of lymphoma involvement.
* HIV serology: Negative
* Hepatitis B and C serology: Negative
* Testicular Ultrasound: Normal, no evidence of involvement

**2. Current Oncological Treatment:**

Completed Chemotherapy (Current Admission):

* MATRIX Regimen – Cycle 3 (March 26-30, 2025)
  + Rituximab 375 mg/m² IV on days 0 and 5 (March 26 and 31, 2025)
  + Methotrexate 3.5 g/m² IV over 4 hours on day 1 (March 27, 2025)
  + Cytarabine 2 g/m² IV q12h on days 2-3 (4 doses, March 28-29, 2025)
  + Thiotepa 30 mg/m² IV on day 4 (March 30, 2025)
  + G-CSF (lipegfilgrastim) 6 mg once on April 01, 2025 (day 6)

Supportive Care:

* Leucovorin rescue: 15 mg/m² IV q6h starting 24 hours after methotrexate, continued until methotrexate level < 0.1 μmol/L
* IV hydration with sodium bicarbonate (to maintain urine pH > 7.0) before, during, and after methotrexate

**3. History of Oncological Treatment:**

First-Line Therapy:

* Dexamethasone 16 mg IV daily for 5 days (January 12-16, 2025) for initial management of cerebral edema and mass effect
* MATRIX chemotherapy regimen
  + Cycle 1: February 01-05, 2025 (completed)
  + Cycle 2: February 22-26, 2025 (completed) with stem cell mobilisation
  + Cycle 3: March 26-30, 2025 (current admission, completed)

Response Assessment (After Cycle 2):

* MRI Brain with contrast (March 14, 2025): Right frontal lesion decreased to 2.1 x 1.7 cm (previously 4.0 x 3.5 cm). Left thalamic lesion decreased to 1.1 x 0.8 cm (previously 2.5 x 2.0 cm). Marked reduction in surrounding edema. No new lesions.
* Response classification: Partial Response per IPCG criteria

**4. Comorbidities**

* L4-L5 discectomy (2015) for herniated disc with residual chronic lower back pain
* Moderate obstructive sleep apnea, compliant with CPAP therapy
* Former smoker (quit 2017, 10 pack-year history)
* Nephrolithiasis (2019, calcium oxalate stones, passed spontaneously)
* Major depressive disorder (diagnosed 2018, well-controlled on medication)
* Hypercholesterolemia
* Allergies: Sulfa drugs (rash), Latex (urticaria)

**5. Physical Exam at Admission:**

General: 46-year-old male appearing appropriately groomed but mildly fatigued.  
Vitals: BP 134/78 mmHg, HR 82 bpm, RR 16/min, Temp 36.9°C, SpO2 98% on room air.  
HEENT: Normocephalic, atraumatic. PERRLA. EOMI. No scleral icterus. Mucous membranes moist.  
Neck: Supple. No lymphadenopathy or thyromegaly.  
Cardiovascular: Regular rate and rhythm. Normal S1, S2. No murmurs, rubs, or gallops.  
Respiratory: Lungs clear to auscultation bilaterally. No wheezes, rales, or rhonchi.  
Abdomen: Soft, non-tender, non-distended. No hepatosplenomegaly. Normal bowel sounds.  
Extremities: No edema. Full range of motion. 2+ peripheral pulses throughout.  
Skin: No rashes. Normal turgor. Mild alopecia due to prior chemotherapy.  
Neurological:

* Mental Status: Alert and oriented to person, place, time, and situation.
* Cranial Nerves: II-XII intact.
* Motor: 5/5 strength throughout all extremities.
* Sensation: Intact to light touch, pinprick, temperature, and proprioception.
* Reflexes: 2+ and symmetric throughout.
* Coordination: Finger-to-nose and heel-to-shin testing intact.
* Gait: Steady. No ataxia.
* Mild right-sided pronator drift (improved from admission for Cycle 2).

ECOG Performance Status: 1 (Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature).

**6. Epicrisis (Hospital Course Summary):**

Mr. Foster is a 46-year-old male with primary CNS DLBCL diagnosed in January 2025, admitted for his third cycle of MATRIX chemotherapy. He has shown partial response to the first two cycles with significant reduction in the size of both brain lesions and clinical improvement in his neurological symptoms.

The patient was admitted on March 25, 2025, and pre-chemotherapy workup revealed adequate renal, hepatic, and bone marrow function to proceed with the third cycle. He received the complete MATRIX regimen as scheduled, consisting of rituximab, high-dose methotrexate, cytarabine, and thiotepa over 5 days.

Methotrexate administration was accompanied by aggressive hydration and urinary alkalinization to maintain urine pH > 7.0, and leucovorin rescue was initiated 24 hours after methotrexate completion. Methotrexate levels were monitored daily, with the last level (April 1, 2025) at 0.08 μmol/L, allowing for discontinuation of leucovorin. Lipegfilgrastim was applied as planned on day 6 to accelerate neutrophil recovery.

Neurologically, the patient remained stable throughout the admission, with slight improvement in the previously noted right pronator drift. Repeat MRI was not performed during this admission but is scheduled as part of the post-cycle 4 response assessment.

The patient experienced expected toxicities including grade 4 neutropenia, grade 3 thrombocytopenia (platelet nadir 28 × 10^9/L without bleeding), grade 2 mucositis (managed with oral care protocol and pain medication), and grade 1 nausea (controlled with antiemetics). He did not require platelet transfusions, and hemoglobin remained stable.

By discharge, the patient's neutrophil count had recovered to 1.2 × 10^9/L, platelets were rising at 56 × 10^9/L, and oral mucositis was improving. He was afebrile for 48 hours, tolerating oral intake, and ambulatory.

The patient has been scheduled for his fourth and final cycle of MATRIX in approximately 3 weeks, pending adequate hematological recovery. A comprehensive response assessment is planned upon completion of 4 cycles to determine the need for consolidation therapy.

**7. Medication at Discharge:**

* Loperamide 2 mg PO PRN for diarrhea (max 8 mg/24h)
* Magic mouthwash (lidocaine/diphenhydramine/antacid) 5-10 mL swish and spit Q4H PRN for oral mucositis
* Acyclovir 400 mg PO BID (herpes prophylaxis)
* Atovaquone 1500 mg PO daily with food (PCP prophylaxis - alternative due to sulfa allergy)
* Pantoprazol 40 mg PO daily (GI prophylaxis)
* Atorvastatin 20 mg PO daily at bedtime
* Sertraline 100 mg PO daily
* Acetaminophen 650 mg PO Q6H PRN for pain or fever
* Zolpidem 5 mg PO QHS PRN for insomnia

**8. Further Procedure / Follow-up:**

Oncology Follow-up:

* Follow up with Dr. N. Chen in 1 week (April 9, 2025) for post-chemotherapy assessment
* CBC with differential 2 times weekly
* Cycle 4 MATRIX tentatively scheduled for April 15-20, 2025 (contingent on adequate blood count recovery)

Response Assessment Plan:

* MRI Brain response assessment scheduled after completion of Cycle 4

Planned Post-Induction Therapy:

* If complete response: Consolidation with high-dose chemotherapy and autologous stem cell transplantation to be considered
* If partial response: Additional cycles of chemotherapy with consideration of alternative regimens
* Comprehensive neuropsychological testing to be scheduled after completion of induction therapy

Patient Education Provided:

* Instructions on monitoring temperature and symptoms requiring immediate medical attention
* Strict neutropenic precautions reviewed
* Importance of medication adherence emphasized
* Nutritional counseling provided given chemotherapy-induced mucositis
* Strategies for managing fatigue discussed
* Detailed education provided on PICC line care, signs/symptoms of complications (infection, clot)

**9. Lab Values (Excerpt):**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Parameter | Admission (3/25/2025) | Nadir/ Peak | Discharge (4/2/2025) | Units | Reference Range |
| WBC | 4.8 | 0.6 (3/31) | 2.8 | × 10^9/L | 4.0-11.0 |
| ANC | 3.1 | 0.2 (3/31) | 1.2 | × 10^9/L | 2.0-7.0 |
| Hemoglobin | 10.5 | 9.6 (4/1) | 9.8 | g/dL | 13.5-17.5 (M) |
| Platelets | 132 | 28 (4/1) | 56 | × 10^9/L | 150-400 |
| Creatinine | 0.9 | 1.2 (3/28) | 0.9 | mg/dL | 0.7-1.3 |
| ALT | 32 | - | 46 | U/L | 7-56 |
| AST | 28 | - | 38 | U/L | 8-48 |
| Total Bilirubin | 0.8 | - | 1.0 | mg/dL | 0.2-1.2 |
| LDH | 265 | - | 248 | U/L | 135-225 |
| Methotrexate Level | - | 73.4 (3/27, 6h post) | 0.08 (4/1) | μmol/L | <0.1 (for discharge) |
| Sodium | 138 | - | 137 | mmol/L | 135-145 |
| Potassium | 4.0 | 3.4 (3/28) | 3.8 | mmol/L | 3.5-5.0 |

**Electronically Signed By:**  
Dr. N. Chen (Neuro-Oncology)  
Date/Time: 2025-04-02 14:30

Dr. V. Patel (Neurology)  
Date/Time: 2025-04-01 16:45