Patient: Terence Fletcher (DOB 1950-04-22)

Medical Record Number: 891275

Date of Admission: 2025-04-01

Date of Discharge: 2025-04-08

Admitting Physician: Dr. M. Johnson (Hematology/Oncology)

Consulting Physician: Dr. A. Williams (Hematology), Dr. T. Garcia (Nephrology)

**Discharge Diagnosis: Autoimmune Hemolytic Anemia Secondary to Chronic Lymphocytic Leukemia**

**1. Detailed Oncological Diagnosis:**

Primary Diagnosis: Chronic Lymphocytic Leukemia (CLL)

Date of Initial Diagnosis: November 2023

Histology:

* Peripheral blood and bone marrow biopsy (November 2023) showed lymphocytosis with 65% infiltration of small, mature-appearing lymphocytes
* Immunophenotyping: CD5+, CD19+, CD20+ (dim), CD23+, CD200+, surface IgM/IgD+ (dim), kappa light chain restricted
* Immunohistochemistry: PAX5+, CD20+, CD5+, CD23+, LEF1+, kappa light chain restriction, CD10-, cyclin D1- • Flow cytometry confirmed clonal B-cell population with the above markers and low expression of CD20 and sIg.

Molecular Studies:

* IGHV mutation status: Unmutated (unfavorable)
* FISH panel: del(13q14): Positive in 60% of cells, del(11q): Negative, del(17p)/TP53: Negative, Trisomy 12: Negative, TP53 mutation: Negative
* Cytogenetics: 46,XY with del(13)(q14q22) in 50% of metaphases

Staging/Risk Stratification:

* Binet Stage: B (lymphocytosis + 3 areas of lymphoid involvement)
* CLL-IPI Score: High Risk (6 points) [Age >65 years (1 point), Unmutated IGHV (2 points), Clinical stage Binet B (1 point), No del(17p)/TP53 mutation (0 points), Beta-2 microglobulin 3.6 mg/L (2 points, >3.5 mg/L)]

Imaging: CT scan at diagnosis (November 2023): Cervical, axillary, and inguinal lymphadenopathy (largest node 2.8 cm). Mild splenomegaly (14.5 cm). No hepatomegaly

Laboratory Markers (at diagnosis): WBC: 68.5 x 10^9/L with 85% lymphocytes, Absolute lymphocyte count: 58.2 x 10^9/L, Hemoglobin: 10.8 g/dL, Platelet count: 120 x 10^9/L, Beta-2 microglobulin: 3.6 mg/L [Reference: <2.0 mg/L], LDH: 285 U/L (mildly elevated)

Clinical Presentations at Diagnosis: Constitutional symptoms: Fatigue, night sweats, weight loss, Lymphadenopathy: Cervical, axillary, and inguinal, Splenomegaly: Mild, Anemia: Hemoglobin 10.8 g/dL, No evidence of Richter transformation, bulky disease.

**2. Current Treatment**:

Management of AIHA

* Prednisone 1 mg/kg/day (80 mg daily) started April 01, 2025
* Rituximab 375 mg/m² IV (total 700 mg) administered on April 03, 2025
* Folic acid 1 mg PO daily
* Supportive transfusions (2 units of extended phenotype matched pRBCs on April 01, 2025)

**3. History of Oncological Treatment**:

Watch and wait strategy: November 2023 - December 2023

First-Line Therapy

* Treatment initiated due to progressive lymphadenopathy, worsening anemia, and constitutional symptoms
* Acalabrutinib 100 mg PO BID started January 2024
  + Good partial response achieved with reduction in lymphocytosis and lymphadenopathy
  + WBC decreased from 68.5 x 10^9/L to 22.6 x 10^9/L by March 2025
  + No previous significant toxicities reported until current AIHA

**4. Comorbidities**:

* Malignant Melanoma, left shoulder (2016, Clark level III, Breslow thickness 1.2mm, wide local excision with negative margins, no evidence of recurrence)
* Cholecystectomy (2010) for symptomatic cholelithiasis • Left Total Hip Arthroplasty (2021) for advanced osteoarthritis
* CABG (2-vessel, 2017) for CAD with 85% occlusion of LAD and 70% occlusion of RCA
* Chronic kidney disease stage G2 (eGFR 72 mL/min/1.73m²)
* GERD with Barrett's Esophagus (surveillance endoscopy due in July 2025)
* Hypothyroidism (post-radioactive iodine ablation for Graves' disease, 2008)
* Allergies: Penicillin (anaphylaxis), Sulfa drugs (rash), Latex (contact dermatitis)

**5. Physical Exam at Admission:**

General: 74-year-old male appearing pale, fatigued, and mildly jaundiced. In moderate distress.

Vitals: BP 145/85 mmHg, HR 102 bpm, RR 20/min, Temp 37.3°C, SpO2 94% on room air.

HEENT: Scleral icterus present. Oral mucosa pale. Cervical lymphadenopathy bilaterally (1-2 cm nodes).

Cardiovascular: Tachycardic with regular rhythm. Systolic flow murmur (2/6) best heard at the apex. No rubs or gallops.

Respiratory: Lungs clear to auscultation bilaterally. Mild tachypnea.

Abdomen: Soft, non-tender. Spleen palpable 2 cm below left costal margin. No hepatomegaly. Lymphatic: Bilateral axillary lymphadenopathy (1-2 cm nodes). Bilateral inguinal lymphadenopathy (1-2 cm nodes).

Extremities: No edema. Mild pallor. No petechiae or purpura. Skin: Mild jaundice.

No rashes. Neurological: Alert and oriented x3. Cranial nerves intact. Motor strength 5/5 in all extremities. No sensory deficits.

ECOG Performance Status: 2 (Ambulatory, capable of self-care, unable to work, up and about >50% of waking hours).

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

Mr. Fletcher is a 74-year-old male with Chronic Lymphocytic Leukemia diagnosed in November 2023, currently on Acalabrutinib therapy, who presented with profound fatigue, dizziness, and mild jaundice for 5 days. Laboratory evaluation revealed severe anemia (Hgb 6.2 g/dL), markedly elevated indirect bilirubin, elevated LDH, decreased haptoglobin, and a positive direct antiglobulin test (DAT), consistent with warm autoimmune hemolytic anemia, a known complication of CLL.

Acalabrutinib was continued during admission despite the AIHA diagnosis, as discontinuation could potentially cause a CLL flare-up. The hemolysis is most likely related to the underlying CLL rather than the BTK inhibitor therapy, and current evidence suggests continuing Acalabrutinib may actually help control autoimmune complications. The patient was promptly started on high-dose corticosteroids (prednisone 1 mg/kg/day) and received 2 units of extended phenotype matched pRBCs on the day of admission, with appropriate premedication. On hospital day 3, rituximab was administered as second-line therapy for AIHA.

The hemolysis began to stabilize by hospital day 4, with rising hemoglobin (7.6 g/dL), decreasing bilirubin, and decreasing reticulocyte count. The patient's symptoms improved significantly with resolution of dizziness and decreased fatigue. Renal function remained stable throughout the admission.

A multi-disciplinary team discussion between hematology-oncology and nephrology concluded that the AIHA was most likely related to the underlying CLL, which is known to have a high incidence of autoimmune cytopenias. The decision was made to continue Acalabrutinib therapy throughout the hospitalization to prevent a potential CLL flare-up that could worsen the AIHA. Recent evidence suggests that BTK inhibitors may actually help in controlling autoimmune phenomena associated with CLL, and discontinuation could potentially lead to rapid disease progression and worsening of autoimmune complications.

By discharge, the patient's hemoglobin had stabilized at 8.5 g/dL without additional transfusions, and markers of hemolysis were improving. He was clinically stable and able to ambulate independently, with significantly reduced fatigue.

**7. Medication at Discharge:**

New Medications:

* Prednisone 80 mg PO daily for 7 days, then taper by 10 mg every 7 days
* Folic acid 1 mg PO daily
* Valacyclovir 500mg PO BID (because of rituximab)
* Atovaquone 1500 mg PO daily (while on steroids)
* Calcium carbonate 600 mg + Vitamin D 400 IU PO BID (while on steroids)
* Famotidine 20 mg PO (taken 10 hours before or 2 hours after Acalabrutinib)

Continued Medications:

* Acalabrutinib 100 mg PO BID (continued during hospitalization to prevent CLL flare-up)
* Levothyroxine 88 mcg PO daily (take 1 hour before breakfast)
* Metoprolol succinate 50 mg PO daily (for CAD)
* Atorvastatin 40 mg PO daily (for CAD)
* Aspirin 81 mg PO daily (for CAD)
* Acetaminophen 650 mg PO Q6H PRN pain

Stopped Medications:

* Pantoprazol (due to interaction with Acalabrutinib)

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

Hematology/Oncology Follow-up:

* Follow up with Dr. M. Johnson in 1 week (April 15, 2025) for clinical assessment, hemolysis parameters, and CBC
* Weekly CBC, reticulocyte count, LDH, and bilirubin until AIHA resolves
* Flow cytometry to assess CLL disease burden in 2 weeks

Recommendations:

* Continue weekly rituximab infusions (375 mg/m²) for a total of 4 doses, next dose scheduled for April 10, 2025 in outpatient clinic
* Follow prednisone taper schedule strictly
* Monitor blood glucose 3 times daily while on high-dose steroids
* Continue Acalabrutinib therapy without interruption while monitoring for any signs of increased hemolysis or bleeding

Patient education

* Bleeding: (Increased risk from Acalabrutinib + Aspirin + Prednisone)
  + Report unusual bruising, black/bloody stool, vomiting blood/coffee grounds, severe headache/dizziness. Go to ER for serious bleeding.
* Infection: (Increased risk from CLL/Treatments)
  + Report fever > 100.4°F (38°C), chills, new cough, shortness of breath, burning urination. Call clinic immediately if fever occurs.
* Worsening Anemia:
  + Report increased fatigue, dizziness, shortness of breath, pale/yellow skin.

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **Admission (4/1/2025)** | **Discharge (4/8/2025)** | **Units** | **Reference Range** |
| Hemoglobin | 6.2 | 8.5 | g/dL | 13.5-17.5 (M) |
| Hematocrit | 18.5 | 25.3 | % | 41-50 (M) |
| MCV | 102 | 100 | fL | 80-100 |
| WBC | 22.6 | 25.8 | x10^9/L | 4.0-11.0 |
| Lymphocytes | 85 | 82 | % | 20-40 |
| ALC | 19.2 | 21.2 | x10^9/L | 1.0-4.8 |
| Platelets | 110 | 125 | x10^9/L | 150-400 |
| Reticulocytes | 12.5 | 8.2 | % | 0.5-2.5 |
| LDH | 845 | 480 | U/L | 135-225 |
| Total Bilirubin | 4.8 | 2.6 | mg/dL | 0.2-1.2 |
| Direct Bilirubin | 0.6 | 0.5 | mg/dL | 0.0-0.3 |
| Haptoglobin | <10 | 22 | mg/dL | 30-200 |
| Creatinine | 1.1 | 1.0 | mg/dL | 0.5-1.1 |
| eGFR | 68 | 72 | mL/min/1.73m² | >90 |
| Direct Antiglobulin Test | Positive (IgG) | Positive (IgG) |  | Negative |
| Blood Glucose | 95 | 98 | mg/dL | 70-100 |
| TSH | 2.8 | - | mIU/L | 0.4-4.0 |

Electronically Signed By:

Dr. M. Johnson (Hematology/Oncology) Date/Time: 2025-04-08 15:30

Dr. A. Williams (Hematology) Date/Time: 2025-04-08 14:20

Dr. T. Garcia (Nephrology) Date/Time: 2025-04-08 13:45