**Patient**: O.M. (DOB 1988-11-10)  
**MRN**: 492385  
**Admission**: 2025-03-22 | **Discharge**: 2025-04-05  
**Physicians**: Dr. A. Patel (Hematology), Dr. J. Walker (Nephrology), Dr. S. Chen (Neurology), Dr. T. Robinson (Critical Care)

**DISCHARGE DIAGNOSIS**

Acquired Thrombotic Thrombocytopenic Purpura (TTP)

**DETAILED DIAGNOSIS**

* **Primary**: Acquired Thrombotic Thrombocytopenic Purpura (TTP)
* **Diagnosed**: March 22, 2025
* **Diagnostic Criteria**:
  + Severe thrombocytopenia (platelets 9 × 10^9/L)
  + Microangiopathic hemolytic anemia with schistocytes
  + Neurological symptoms (confusion, headache)
  + Renal involvement (elevated creatinine, microscopic hematuria)
  + ADAMTS13 activity <5% (normal >70%)
  + Positive ADAMTS13 inhibitor (4.2 Bethesda Units)
* **Clinical Presentation**: 3-day history of worsening fatigue, persistent headache, confusion, and scattered petechiae on extremities. Scleral icterus and scattered petechiae on hard palate and lower extremities noted on exam. Patient initially oriented only to person, with mild dysmetria on finger-to-nose testing and slightly unsteady gait.
* **Potential Trigger**: Recent upper respiratory infection (2 weeks prior)
* **PLASMIC Score**: 7/7 points (High Risk) [Platelet count <30 × 10^9/L, Hemolysis present, No active cancer, No transplant, MCV 84 fL, INR 1.1, Creatinine 1.8 mg/dL]

**TREATMENT**

**Therapeutic Plasma Exchange (TPE)**:

* Started urgently on admission day
* Daily TPE for 10 consecutive days
* First 5 days: 1.5 plasma volume exchanges
* Subsequent 5 days: 1.0 plasma volume exchanges
* Replacement: 100% fresh frozen plasma

**Immunosuppressive Therapy**:

* Methylprednisolone 1,000 mg IV daily for 3 days
* Prednisone 1 mg/kg/day PO (80 mg daily) starting day 4

**Rituximab**:

* 375 mg/m² IV weekly (started day 3)
* Completed 2 doses in hospital
* 2 more doses scheduled as outpatient

**Caplacizumab**:

* 10 mg IV loading dose after first TPE
* 11 mg SC daily maintenance throughout hospitalization
* To continue for at least 30 days after TPE discontinuation

**Supportive Care**:

* PRBC transfusions (2 units on admission, 1 unit on day 4)
* Platelet transfusions withheld except for severe bleeding
* Prophylactic folic acid and vitamin B12
* DVT prophylaxis (started day 8 when platelets >50,000/μL)

**COMORBIDITIES**

* Hypertension (2019, well-controlled)
* Hypothyroidism (2020, on levothyroxine)
* Migraines with aura (infrequent)
* G2P2 (2 uncomplicated pregnancies)
* No prior history of bleeding disorders, thrombosis, or autoimmune disease

**HOSPITAL COURSE**

36-year-old female presented with 3-day history of fatigue, headache, confusion, and petechiae. Initial labs showed severe thrombocytopenia, hemolytic anemia, and schistocytes on peripheral smear. Admitted to ICU with high suspicion for TTP, and urgent TPE initiated within 6 hours of presentation.

Hospital course was complicated by:

* Worsening neurological symptoms with brief seizure on day 2, requiring levetiracetam 500 mg BID temporarily
* Intermittent epistaxis requiring nasal packing and application of topical tranexamic acid
* Acute kidney injury (peak creatinine 2.1 mg/dL) with microscopic hematuria (3+ blood, 10-20 RBC/hpf)
* Hypertension requiring IV labetalol initially, followed by oral amlodipine
* Transient troponin elevation (peak 0.08 ng/mL) without ECG changes, attributed to microvascular thrombosis

Clinical improvement began by day 4 after TPE and immunosuppressive therapy. Neurological symptoms resolved, platelet count gradually increased, and hemolysis markers decreased. Caplacizumab added on day 1 (after first TPE), and rituximab initiated on day 3. Transferred from ICU to regular floor on day 6.

By day 10, platelet count increased to 132 × 10^9/L, and hemoglobin stabilized at 9.8 g/dL without further transfusions. TPE discontinued after 10 treatments, with sustained hematological response (platelets >150 × 10^9/L for 48 hours post-TPE).

Antimicrobial prophylaxis (TMP-SMX and valacyclovir) initiated due to immunosuppression. Infectious and autoimmune workup negative for associated conditions.

Discharged on day 15 with normalized platelet count (178 × 10^9/L), improving hemoglobin (10.2 g/dL), normalized LDH, and improved renal function (creatinine 1.1 mg/dL).

**DISCHARGE MEDICATIONS**

**TTP-Related**:

* Caplacizumab 11 mg SC daily (continue through May 5, 2025)
* Prednisone 80 mg PO daily for 7 days, then taper by 10 mg weekly
* Folic acid 1 mg PO daily
* Vitamin B12 1,000 mcg PO daily
* TMP-SMX 800/160 mg PO three times weekly
* Valacyclovir 500 mg PO daily
* Calcium carbonate 600 mg PO BID
* Vitamin D3 2,000 IU PO daily
* Pantoprazole 40 mg PO daily

**Chronic Medications**:

* Levothyroxine 112 mcg PO daily
* Amlodipine 5 mg PO daily

**PRN Medications**:

* Acetaminophen 650 mg PO Q6H PRN pain/fever
* Ondansetron 4 mg PO Q8H PRN nausea

**FOLLOW-UP PLAN**

**Hematology**:

* Dr. A. Patel in 3 days (April 8, 2025)
* Weekly CBC, LDH, reticulocyte count, CMP for at least 4 weeks
* Twice weekly CBC during first week post-discharge
* ADAMTS13 activity 1 week after completing rituximab

**TTP Monitoring**:

* Close monitoring for relapse signs (petechiae, neurological symptoms, fatigue)
* Long-term ADAMTS13 monitoring: Monthly for 3 months, then quarterly for 1 year

**Infusion Center**:

* Rituximab infusions scheduled for April 12 and 19, 2025
* Home caplacizumab administration teaching completed

**Nephrology**:

* Dr. J. Walker in 2 weeks (April 19, 2025)

**Bone Health**:

* DEXA scan scheduled for April 15, 2025
* Vitamin D level to be rechecked in 8 weeks

**KEY LAB VALUES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **Admission** | **Nadir/Peak** | **Discharge** | **Reference** |
| Hemoglobin | 7.2 | 6.8 (3/23) | 10.2 | 12.0-16.0 g/dL |
| Platelets | 9 | 7 (3/23) | 178 | 150-400 ×10^9/L |
| Reticulocytes | 8.2 | - | 3.5 | 0.5-2.5% |
| LDH | 1,250 | 1,450 (3/23) | 220 | 135-225 U/L |
| Haptoglobin | <8 | <8 (3/22-3/26) | 45 | 30-200 mg/dL |
| Total Bilirubin | 3.2 | 3.6 (3/23) | 1.1 | 0.1-1.2 mg/dL |
| Creatinine | 1.8 | 2.1 (3/24) | 1.1 | 0.5-1.1 mg/dL |
| ADAMTS13 Activity | <5 | - | - | >70% |
| ADAMTS13 Inhibitor | 4.2 | - | - | Negative BU |

**Electronically Signed**:  
Dr. A. Patel, MD (Hematology)  
Dr. J. Walker, MD (Nephrology)  
Date: 2025-04-05