**Patient**: Aisha Williams  
**MRN**: 738695  
**DOB**: 2003-03-10 (22 years)  
**Admission**: 2025-03-25 | **Discharge**: 2025-03-30  
**Physicians**: Dr. K. Johnson (Hematology), Dr. M. Peterson (Pain Management), Dr. L. Garcia (Infectious Disease)

**DISCHARGE DIAGNOSIS**

Sickle Cell Disease (HbSS) with Acute Vaso-occlusive Crisis

**DETAILED DIAGNOSIS**

* **Primary**: Sickle Cell Disease (Hemoglobin SS)
* **Diagnosed**: At birth, confirmed at 6 months of age (2003)
* **Genotype Confirmation**:
  + Homozygous for hemoglobin S (HbSS)
  + Alpha globin gene analysis: Normal (No alpha thalassemia)
  + Beta globin gene: Homozygous for βS mutation (GAG→GTG at codon 6)

**CURRENT TREATMENT**

**Clinical Presentation**:

* Severe pain in lower back, bilateral hips, and right knee
* Pain score 9/10 at admission
* No fever, chest pain, respiratory symptoms, or neurological symptoms

**Imaging Studies**:

* Chest X-ray: No acute process, stable cardiomegaly
* Abdominal ultrasound: Mild hepatomegaly (16.2 cm), moderate splenomegaly (15.8 cm), post cholecystectomy

**Pain Management**:

* Intravenous fluids: 0.9% normal saline at 125 mL/hr
* Opioid analgesics:
  + Morphine 6 mg IV every 4 hours scheduled
  + Morphine 4 mg IV every 2 hours PRN breakthrough pain
* Non-opioid adjuncts:
  + Ketorolac 15 mg IV every 6 hours for 48 hours, then transitioned to ibuprofen
  + Acetaminophen 1000 mg PO every 8 hours

**Disease-Specific Treatment**:

* Hydroxyurea 1500 mg PO daily (continued home dose)
* Oxygen supplementation: 2L by nasal cannula to maintain SpO2 >95%
* Incentive spirometry: 10 breaths every 2 hours while awake

**Supportive Measures**:

* DVT prophylaxis with enoxaparin 40 mg SubQ daily
* Continued folic acid supplementation
* Docusate sodium 100 mg PO twice daily
* Warm compresses to painful areas
* Physical therapy consultation for gentle mobility exercises

**PREVIOUS TREATMENT HISTORY**

**Disease-Modifying Therapy**:

* Hydroxyurea initiated at age 8 (2011) due to frequent vaso-occlusive crises
* Current dose: 1500 mg PO daily (approximately 25 mg/kg/day)
* Good response with reduction in annual crisis frequency from 6-8 to 2-3

**Transfusion History**:

* No chronic transfusion program
* Last transfusion: 2024-11 during hospitalization for vaso-occlusive crisis
* Estimated lifetime units received: 32 units
* No evidence of alloimmunization (negative antibody screen)
* Iron studies (2024-12): Ferritin 325 ng/mL, Transferrin saturation 38%

**Prior Complications and Hospitalizations**:

* Average 2-3 hospitalizations annually for vaso-occlusive crises
* Acute chest syndrome: 3 episodes (2012, 2017, 2022)
* Avascular necrosis of right humeral head (2016)
* Cholecystectomy for cholelithiasis (2019)
* Right ankle ulcer (2021) - healed after 6 months
* No history of stroke or acute neurological events

**Outpatient Pain Management**:

* Home pain regimen: Oxycodone 5-10 mg every 6 hours PRN
* Non-pharmacological: Heat therapy, massage, meditation

**COMORBIDITIES**

* Iron overload (related to chronic hemolysis and transfusions)
* Avascular necrosis of right humeral head
* Vitamin D deficiency
* Mild asthma
* History of anxiety and depression

**HOSPITAL COURSE**

22-year-old female with homozygous sickle cell disease (HbSS) presented with severe pain in lower back, bilateral hips, and right knee that failed to respond to home pain regimen. Reported missing two doses of hydroxyurea in the week prior due to nausea.

On admission: mild dehydration, leukocytosis, and hemoglobin 7.2 g/dL (lower than baseline 8.0-8.5 g/dL but above transfusion threshold). Treatment included IV hydration, oxygen supplementation, and multimodal pain management.

Hospital course was complicated by difficult initial pain control requiring opioid escalation and addition of a lidocaine patch. By day 3, pain began to subside, allowing transition to oral analgesics. Blood cultures remained negative with no evidence of acute chest syndrome, infection, or other complications.

Hydroxyurea was continued throughout admission, and medication adherence education was provided. Prior to discharge, pain was adequately controlled on oral analgesics, hemoglobin stabilized at 7.3 g/dL, and reticulocyte count remained appropriate. Patient able to ambulate with minimal assistance and perform ADLs.

**DISCHARGE MEDICATIONS**

* Hydroxyurea 1500 mg PO daily
* Oxycodone 10 mg PO every 6 hours PRN
* Ibuprofen 600 mg PO every 8 hours with food for 7 days
* Acetaminophen 1000 mg PO every 8 hours (not to exceed 3000 mg daily)
* Folic acid 1 mg PO daily
* Docusate sodium 100 mg PO twice daily
* Vitamin D3 2000 IU PO daily
* Albuterol inhaler 2 puffs every 4-6 hours PRN wheezing

**FOLLOW-UP PLAN**

**Hematology**:

* Dr. K. Johnson in 1 week (2025-04-06)
* Labs (CBC, reticulocyte count, LDH, CMP) prior to appointment
* Discuss possible adjustment to hydroxyurea dosing
* Assess requirement for additional iron studies

**Pain Management**:

* Dr. M. Peterson in 2 weeks
* Review and potential optimization of outpatient pain control
* Exploration of additional non-pharmacological strategies

**Primary Care**:

* Follow-up in 4 weeks
* Update on hospital course and medication changes
* Annual influenza vaccination due

**Additional Services**:

* Social worker referral for home support assessment
* Physical therapy weekly for 4 weeks (strengthening and pain management)
* Psychological support referral for anxiety and depression

**Patient Education**:

* Review of sickle cell disease triggers and early intervention
* Hydration importance (minimum 2-3 liters daily)
* Signs/symptoms requiring urgent medical attention
* Medication administration, side effects, and adherence
* When to use rescue medications vs. seeking emergency care

**KEY LAB VALUES**

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter** | **Admission** | **Discharge** | **Reference** |
| Hemoglobin | 7.2 | 7.3 | 12.0-15.0 g/dL |
| WBC | 18.6 | 12.4 | 4.0-11.0 ×10^9/L |
| Neutrophils | 14.2 | 9.2 | 1.8-7.5 ×10^9/L |
| Platelets | 485 | 450 | 150-400 ×10^9/L |
| Reticulocytes | 15.8 | 16.2 | 0.5-2.5% |
| Absolute Reticulocytes | 315 | 325 | 25-100 ×10^9/L |
| Total Bilirubin | 3.4 | 3.2 | 0.1-1.2 mg/dL |
| LDH | 520 | 485 | 135-225 U/L |
| CRP | 3.2 | 1.5 | <0.5 mg/dL |
| Ferritin | 340 | - | 15-150 ng/mL |

**Electronically Signed**:  
Dr. K. Johnson (Hematology)  
Dr. M. Peterson (Pain Management)  
Date: 2025-03-30