**Patient**: A.C. (DOB 1992-01-07)  
**MRN**: 472951  
**Admission**: 2024-03-20 | **Discharge**: 2024-03-27  
**Physicians**: Dr. K. Mitchell (Hem/Onc), Dr. L. Ramirez (ID), Dr. P. Wong (Pulm)

**DISCHARGE DIAGNOSIS**

Metastatic Testicular Seminoma with Febrile Neutropenia after PEB Cycle 3

**ONCOLOGICAL DIAGNOSIS**

* **Primary**: Pure Testicular Seminoma, Right Testis, Stage IIIC
* **Diagnosed**: January 10, 2024
* **Histology**: Right Radical Inguinal Orchiectomy (Jan 8, 2024): Pure seminoma, 4.2 cm. LVI positive. No syncytiotrophoblastic elements or non-seminomatous components. Margins negative.
* **Staging**: pT2N3M1b, Stage IIIC
* **Risk Classification**: IGCCCG Intermediate Prognosis Group (based on non-pulmonary visceral metastases)
* **Imaging**:
  + Initial CT (Jan 12, 2024): Retroperitoneal lymphadenopathy (largest 6.8 x 4.5 cm para-aortic), bilateral pulmonary nodules (0.6-1.2 cm), liver metastasis in segment VII (1.2 cm)
  + Mid-treatment CT showed 55% reduction in retroperitoneal nodes (largest now 3.1 x 2.2 cm) and partial resolution of pulmonary nodules
* **Tumor Markers at Diagnosis**:
  + AFP: 25.2 ng/mL (Normal: <9 ng/mL)
  + β-hCG: 35 mIU/mL (Elevated: <5 mIU/mL)
  + LDH: 525 U/L (Elevated: 135-225 U/L)

**CURRENT TREATMENT**

**Febrile Neutropenia Management**:

* Blood cultures: Staphylococcus epidermidis (MRSE) from Hickmann catheter
* Hickmann catheter removal (Mar 21, 2024)
* CT chest (Mar 22, 2024): no pneumonia
* Antibiotics: Piperacillin-tazobactam and vancomycin
* Bleomycin (Day 8, 15) held due to neutropenia

**TREATMENT HISTORY**

**Surgical**:

* Right Radical Inguinal Orchiectomy (Jan 8, 2024)
* Sperm banking completed before chemotherapy

**Systemic Therapy**:

* **PEB Cycle 1** (Jan 22-26, 2024):
  + Complications: Grade 2 nausea/vomiting, Grade 1 neuropathy
* **PEB Cycle 2** (Feb 19-23, 2024):
  + Complications: Grade 2 nausea/vomiting, Grade 1-2 neuropathy, Grade 1 tinnitus
* **PEB Cycle 3** (Mar 13-17, 2024):
  + Complications: Fever (38.9°C) and neutropenia (ANC 0.2 x 10^9/L) on Day 7

**Response Assessment**:

* Mid-treatment CT (post-Cycle 2): 55% reduction in target lesions (PR)
* Tumor markers pre-Cycle 3 (Mar 12, 2024):
  + AFP: 8.8 ng/mL (Normal)
  + β-hCG: <2 mIU/mL (Normal)
  + LDH: 245 U/L (Nearly normalized)

**COMORBIDITIES**

* Mild asthma (childhood onset, controlled)
* Generalized anxiety disorder (2020)
* Hyperlipidemia (2022)
* History of kidney stones (2021)
* Seasonal allergies

**HOSPITAL COURSE**

32-year-old male with intermediate-risk metastatic seminoma admitted with febrile neutropenia (38.9°C, ANC 0.2 x 10^9/L) 7 days after PEB Cycle 3. Initial management included blood/urine cultures and empiric piperacillin-tazobactam.

Blood cultures from Hickmann catheter grew MRSE (peripheral cultures negative), confirming catheter-related bloodstream infection. Vancomycin was added, and the catheter was removed on hospital day 2 with catheter tip also growing MRSE. Patient defervesced by day 3.

Neutropenia persisted with ANC nadir of 0.1 x 10^9/L on day 3. Filgrastim (G-CSF) was started on day 2, with ANC recovery to 2.8 x 10^9/L by discharge. CT chest on day 3 showed no pneumonia, pulmonary embolism, or bleomycin toxicity. The previously identified pulmonary metastases remained stable to slightly decreased in size.

Patient developed Grade 2 mucositis requiring oral care and pain management. No evidence of HSV reactivation was noted on oral examination. Nutritional status was maintained with high-calorie, soft diet despite decreased oral intake. Transient creatinine elevation (peak 1.3 mg/dL from baseline 0.9 mg/dL) improved with hydration. Hypomagnesemia and hypokalemia were corrected with supplementation. Audiogram performed during hospitalization showed stable mild high-frequency hearing loss consistent with cisplatin ototoxicity from previous cycles, without significant worsening.

Multidisciplinary decision: Proceed with PEB Cycle 4 with prophylactic G-CSF starting Day 6 and possible 25% etoposide dose reduction depending on count recovery. No dose reduction recommended for cisplatin at this time despite mild ototoxicity, as benefits outweigh risks in curative-intent therapy.

**DISCHARGE MEDICATIONS**

* Vancomycin 15 mg/kg IV BID x 9 more days (14 days total) via home infusions
* Montelukast 10 mg PO daily
* Fluticasone/salmeterol 250/50 mcg inhaled BID
* Loratadine 10 mg PO daily
* Atorvastatin 20 mg PO qhs
* Escitalopram 10 mg PO daily
* Ondansetron 8 mg PO q8h PRN nausea
* Oxycodone 5 mg PO q6h PRN moderate pain
* Magic mouthwash 5-10 mL swish/spit QID PRN oral pain
* Magnesium oxide 400 mg PO BID x 7 days
* Potassium chloride 20 mEq PO daily x 5 days

**FOLLOW-UP PLAN**

**Oncology**:

* Dr. K. Mitchell in 1 week (Apr 3, 2024)
* CBC, CMP, Mg, K+ twice weekly until recovery
* Tumor markers before Cycle 4
* PEB Cycle 4 planned Apr 10-14, 2024, pending recovery
* PICC line placement Apr 9, 2024

**Infectious Disease**:

* Dr. L. Ramirez on Apr 3, 2024

**Pulmonology**:

* Dr. P. Wong before Cycle 4
* PFTs with DLCO to assess for subclinical bleomycin toxicity

**Imaging**:

* Restaging CT after completion of therapy (May 2024)
* Consider PET/CT if residual masses >3 cm remain

**Patient Education**:

* Report fever ≥38.0°C, bleeding, shortness of breath immediately
* Antibiotic adherence importance
* Maintain hydration (2-3 L daily)
* Nutritional guidance during mucositis

**KEY LAB VALUES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **Admission** | **Nadir/Peak** | **Discharge** | **Reference** |
| WBC | 1.2 | 0.6 (3/22) | 3.8 | 4.0-11.0 x10^9/L |
| ANC | 0.2 | 0.1 (3/22) | 2.8 | 2.0-7.0 x10^9/L |
| Hgb | 10.8 | 9.5 (3/24) | 10.2 | 13.5-17.5 g/dL |
| Plt | 105 | 58 (3/23) | 98 | 150-400 x10^9/L |
| Cr | 1.1 | 1.3 (3/21) | 0.9 | 0.7-1.3 mg/dL |
| K+ | 3.4 | 3.2 (3/21) | 3.8 | 3.5-5.0 mEq/L |
| Mg | 1.5 | 1.4 (3/21) | 1.9 | 1.7-2.2 mg/dL |
| LDH | 235 | - | 228 | 135-225 U/L |
| CRP | 85 | 120 (3/21) | 22 | < 5 mg/L |
| PCT | 2.8 | - | 0.4 | < 0.5 ng/mL |
| Blood Culture | MRSE+ (Hickman) | - | No growth | No growth |

**Electronically Signed**:  
Dr. K. Mitchell (Hematology/Oncology)  
Dr. L. Ramirez (Infectious Disease)  
Dr. P. Wong (Pulmonology)  
Date: 2024-03-27