**Patient:** Harold Jenkins (DOB 1956-11-24)  
**Medical Record Number:** 629541  
**Date of Admission:** 2025-03-22  
**Date of Discharge:** 2025-03-30  
**Admitting Physician:** Dr. N. Rivera (Gastroenterology)  
**Consulting Physician:** Dr. S. Chen (Medical Oncology), Dr. J. Wilson (Interventional Radiology)

**Discharge Diagnosis: Locally Advanced Pancreatic Ductal Adenocarcinoma with Acute Cholangitis Secondary to Biliary Obstruction**

**1. Detailed Diagnosis:**

Primary Diagnosis: Pancreatic Ductal Adenocarcinoma (PDAC), Locally Advanced  
Date of Initial Diagnosis: 2025-02-10  
Location: Head of pancreas

Clinical stage: T4N1M0 (AJCC 8th Edition, Stage III). Unresectable due to vascular encasement

Pathology EUS-guided fine needle biopsy (2025-02-10):

* Moderately differentiated pancreatic ductal adenocarcinoma
* IHC: CK7+, CK20-, CA19-9+, CDX2-, MUC1+
* NGS: KRAS G12D mutation, CDKN2A loss, TP53 mutation

Staging

* Primary tumor: 3.6 × 3.2 cm mass in the pancreatic head encasing the superior mesenteric artery (>180°)
* Regional lymph nodes: Enlarged peripancreatic lymph nodes (largest 1.5 cm)
* Distant metastases: None identified on imaging

**2. Current Treatment:**

Biliary Obstruction and Cholangitis:

* Onset: Progressive jaundice starting approximately 10 days prior to admission
* Acute cholangitis diagnosed at current admission based on:
  + Fever (39.1°C)
  + Leukocytosis (WBC 18.6 × 10^9/L)
  + Hyperbilirubinemia (total bilirubin 12.4 mg/dL)
  + Elevated liver enzymes (AST 285 U/L, ALT 310 U/L, ALP 780 U/L)
  + Dilated bile ducts on imaging (common bile duct 14 mm)
  + Blood cultures positive for Escherichia coli

Current Imaging:

* CT abdomen/pelvis with contrast (2025-03-22): 3.6 × 3.2 cm pancreatic head mass encasing the superior mesenteric artery (>180°) and abutting the portal vein, moderate intrahepatic and extrahepatic biliary ductal dilation, common bile duct measuring 14 mm in diameter, several enlarged peripancreatic lymph nodes (largest 1.5 cm)
* MRCP (2025-03-23): Confirms biliary obstruction at the level of the pancreatic head with upstream dilation of the intra- and extrahepatic biliary tree

Tumor Markers:

* CA 19-9: 2,450 U/mL (Reference: <37 U/mL)
* CEA: 15.8 ng/mL (Reference: <5.0 ng/mL)

Management of Acute Cholangitis:

* Antibiotics:
  + Piperacillin-tazobactam 4.5 g IV every 6 hours for 7 days
  + Transitioned to oral ciprofloxacin 500 mg PO twice daily for 3 additional days
* Biliary decompression:
  + ERCP with placement of covered metal biliary stent (10 mm × 8 cm) on 2025-03-24
  + Bile duct brushings obtained during procedure (cytology negative for malignancy)

**3. History of Previous Treatment:**

Previous Cancer-Directed Therapy:

* Neoadjuvant chemotherapy initiated on 2025-03-09
* Regimen: FOLFIRINOX
  + Oxaliplatin 85 mg/m²
  + Leucovorin 400 mg/m²
  + Irinotecan 180 mg/m²
  + 5-Fluorouracil 400 mg/m² bolus followed by 2400 mg/m² continuous infusion over 46 hours
  + 14-day cycle
* Completed one full cycle with reasonable tolerance (Grade 2 neutropenia, Grade 1 peripheral neuropathy, Grade 2 nausea)

Previous Procedures:

* ERCP with plastic biliary stent placement (2025-01-25)
* EUS-guided FNA of pancreatic mass (2025-02-10)

**4. Secondary Illnesses (Comorbidities):**

* Rheumatoid arthritis (diagnosed 2010, managed with disease-modifying antirheumatic drugs)
* Chronic obstructive pulmonary disease (GOLD Stage 2, 40 pack-year smoking history, quit 2015)
* Atrial fibrillation (paroxysmal, on anticoagulation)
* Coronary artery disease (history of NSTEMI 2018, medical management)
* Chronic kidney disease stage G3a (baseline eGFR 50-55 mL/min/1.73m²)
* Diabetes mellitus type 2 (diagnosed 2025-01, likely secondary to pancreatic disease)
* Depression

**5. Physical Exam at Admission:**

General: 68-year-old male appearing chronically ill, fatigued, and in moderate distress.

Vitals: Temperature 39.1°C, Heart Rate 110 bpm (irregularly irregular), Respiratory Rate 22/min, Blood Pressure 132/78 mmHg, Oxygen Saturation 94% on room air, Weight 72 kg, Height 178 cm, BMI 22.7 kg/m².

HEENT: Normocephalic, atraumatic. Scleral icterus present. Mucous membranes dry.

Neck: Supple, no lymphadenopathy.

Cardiovascular: Irregularly irregular rhythm, tachycardic, normal S1/S2, no murmurs, rubs, or gallops.

Respiratory: Decreased breath sounds bilaterally, scattered wheezes, no crackles.

Abdomen: Distended, tenderness in right upper quadrant and epigastrium. Liver edge palpable 3 cm below costal margin. Positive Murphy's sign. No splenomegaly. Hypoactive bowel sounds.

Extremities: 1+ bilateral lower extremity edema. No cyanosis or clubbing. Skin: Jaundice, dry, poor turgor. No rashes or lesions.

Neurological:Alert and oriented ×3. Cranial nerves II-XII intact. Motor strength 5/5 in all extremities. Sensory intact. Deep tendon reflexes 2+ throughout.

**6. Epicrisis:**

Mr. Jenkins is a 68-year-old male with recently diagnosed locally advanced pancreatic ductal adenocarcinoma who presented with fever, worsening jaundice, and right upper quadrant pain consistent with acute cholangitis secondary to biliary obstruction.

On admission, the patient was febrile (39.1°C), tachycardic, and jaundiced. Laboratory studies revealed leukocytosis (WBC 18.6 × 10^9/L), elevated total bilirubin (12.4 mg/dL), and elevated liver enzymes (AST 285 U/L, ALT 310 U/L, ALP 780 U/L). Blood cultures were obtained and subsequently grew Escherichia coli. Imaging studies confirmed biliary obstruction at the level of the pancreatic head with significant upstream dilation of the biliary tree.

The patient was started on intravenous piperacillin-tazobactam for broad-spectrum coverage of biliary pathogens. Urgent ERCP was performed on 2025-03-24, revealing a stricture at the level of the pancreatic head with purulent bile. The previously placed plastic stent was found to be occluded and was removed. A covered metal biliary stent was successfully deployed, resulting in good biliary drainage. Bile duct brushings were obtained and were negative for malignancy.

Following biliary decompression, the patient's clinical status improved significantly. Fever resolved within 48 hours, and bilirubin levels gradually decreased. Intravenous antibiotics were continued for 7 days and then transitioned to oral ciprofloxacin for an additional 3 days. His white blood cell count normalized, and repeat blood cultures on 2025-03-26 were negative.

During the hospitalization, the patient's FOLFIRINOX chemotherapy was not continued (planned second cycle on 2025-03-23) due to the acute infection. Medical Oncology was consulted and recommended resuming chemotherapy 2 weeks after discharge, assuming adequate recovery from the cholangitis episode.

The patient's hospital course was complicated by:

1. Atrial fibrillation with rapid ventricular response (managed with rate control using metoprolol)
2. Hyperglycemia requiring insulin therapy (likely exacerbated by infection and steroids)
3. Acute kidney injury (peak creatinine 1.8 mg/dL, improved to 1.3 mg/dL at discharge)

Supportive care included intravenous hydration, nutritional support, and pain management. A transition to oral analgesics was successfully completed prior to discharge. The patient received comprehensive education regarding signs of recurrent biliary obstruction, management of his cancer-related symptoms, and follow-up plans for ongoing cancer treatment.

**7. Medication at Discharge:**

* Ciprofloxacin 500 mg PO twice daily for 3 more days
* Oxycodone 5-10 mg PO every 6 hours PRN moderate-severe pain
* Acetaminophen 650 mg PO every 6 hours PRN mild pain or fever
* Ondansetron 8 mg PO every 8 hours PRN nausea
* Metoprolol tartrate 50 mg PO twice daily
* Apixaban 5 mg PO twice daily
* Prednisone 5 mg PO daily
* Tiotropium inhaler 2 puffs daily
* Albuterol inhaler 2 puffs every 4-6 hours PRN wheezing
* Insulin glargine 20 units SubQ at bedtime
* Insulin lispro sliding scale SubQ with meals
* Metformin 500 mg PO twice daily
* Sertraline 50 mg PO daily
* Pantoprazole 40 mg PO daily
* Creon 24,000 unit capsules (Pancrelipase delayed-release capsules): Take 2 capsules PO immediately before or with the first bite of each main meal, and 1 capsule PO immediately before or with the first bite of each snack.

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

Gastroenterology Follow-up:

* Appointment with Dr. N. Rivera in 2 weeks (2025-04-13)
* Laboratory studies (CBC, CMP, lipase, amylase, PT/INR) to be performed prior to appointment
* Discuss removal or exchange of biliary stent in 3-6 months
* RUQ ultrasound in 4 weeks to confirm resolution of biliary dilation

Medical Oncology Follow-up:

* Appointment with Dr. S. Chen in 2 weeks (2025-04-13)
* Laboratory studies including tumor markers (CA 19-9, CEA) to be performed prior to appointment
* Plan to resume FOLFIRINOX chemotherapy (cycle 2 continuation) tentatively on 2025-04-15 with G-CSF support
* Discussion of maintenance therapy options depending on response assessment

Imaging Follow-up:

* Restaging CT chest/abdomen/pelvis with pancreatic protocol scheduled for 2025-04-30
* Evaluation of tumor response to neoadjuvant therapy and vascular involvement

Primary Care Follow-up:

* Appointment with Dr. T. Williams in 3 weeks (2025-04-20)
* Monitoring and management of comorbidities, including close monitoring of renal function (related to CKD, recent AKI, and Metformin use)
* Coordination of care between specialists

Additional Services:

* Nutrition consultation for pancreatic enzyme replacement therapy and dietary recommendations
* Social work referral for psychosocial support and resource assistance
* Palliative care consultation scheduled for 2025-04-15 for symptom management optimization

Patient Education:

* Signs and symptoms of recurrent biliary obstruction requiring immediate attention (fever, worsening jaundice, right upper quadrant pain)
* Importance of medication adherence and follow-up appointments
* Nutritional guidelines and monitoring for weight loss
* Diabetes management including blood glucose monitoring
* When to seek urgent medical care

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **Admission (2025-03-22)** | **Discharge (2025-03-30)** | **Units** | **Reference Range** |
| WBC | 18.6 | 8.4 | ×10^9/L | 4.0-11.0 |
| Hemoglobin | 10.2 | 10.5 | g/dL | 13.5-17.5 |
| Platelets | 345 | 320 | ×10^9/L | 150-400 |
| Total Bilirubin | 12.4 | 4.2 | mg/dL | 0.1-1.2 |
| Direct Bilirubin | 9.6 | 3.1 | mg/dL | 0.0-0.3 |
| AST | 285 | 85 | U/L | 10-40 |
| ALT | 310 | 95 | U/L | 10-55 |
| Alkaline Phosphatase | 780 | 320 | U/L | 35-105 |
| GGT | 680 | 280 | U/L | 8-65 |
| Albumin | 3.1 | 3.3 | g/dL | 3.5-5.0 |
| BUN | 28 | 22 | mg/dL | 7-20 |
| Creatinine | 1.8 | 1.3 | mg/dL | 0.7-1.2 |
| eGFR | 37 | 53 | mL/min/1.73m² | >60 |
| Sodium | 135 | 137 | mmol/L | 135-145 |
| Potassium | 3.6 | 4.1 | mmol/L | 3.5-5.0 |
| Chloride | 100 | 102 | mmol/L | 98-107 |
| Bicarbonate | 23 | 25 | mmol/L | 22-29 |
| Glucose | 238 | 156 | mg/dL | 70-99 |
| Amylase | 95 | 82 | U/L | 25-125 |
| Lipase | 60 | 42 | U/L | 10-73 |
| CA 19-9 | 2,450 | - | U/mL | <37 |
| CEA | 15.8 | - | ng/mL | <5.0 |
| CRP | 15.6 | 3.2 | mg/dL | <0.5 |
| PT | 15.4 | 13.2 | seconds | 11.0-13.5 |
| INR | 1.4 | 1.2 | - | 0.8-1.2 |

Blood Cultures:

* Admission (2025-03-22): Positive for Escherichia coli, sensitive to piperacillin-tazobactam, ciprofloxacin
* Repeat (2025-03-26): No growth after 5 days

Electronically Signed By:  
Dr. N. Rivera (Gastroenterology)  
Date/Time: 2025-03-30 15:30

Dr. S. Chen (Medical Oncology)  
Date/Time: 2025-03-30 14:15

Dr. J. Wilson (Interventional Radiology)  
Date/Time: 2025-03-30 13:45