

Medications	
lacosomide (Vimpat) 100 mg oral (through G tube) BID	
- Pharmacological: functionalized amino acid/Therapeutic: Anticonvulsant	To treat partial-onset seizures
levetiracetam (Keppra) 1500 mg oral BID	
- Pharmacological: pyrrolidine derivative/Therapeutic: Anticonvulsant	Adjunct to treat partial seizures
phenytoin (Dilantin Infatab) 150 mg oral BID	
- Pharmacological: hydantoin derivative/Therapeutic: Anticonvulsant	To treat tonic-clonic or psychomotor seizures
amoxicillin-clavulanate 600 mg oral every 8 hours	
- Pharmacological: penicillin/Therapeutic: Antibiotic	To treat potential infection by community acquired or aspiration pneumonia in which the patient is susceptible against
baclofen 5 mg oral TID	
- Pharmacological: GABA agonist/Therapeutic: Skeletal muscle relaxant	To treat spasticity of cerebral palsy
glycopyrrolate (Robinul) 2 mg oral TID	
- Pharmacological: Anticholinergic/Therapeutic: Antiarrhythmic, bronchodilator, anticholinergic	To reduce respiratory secretions

Demographic Data

Date of Admission: 6/6/22
Admission Diagnosis/Chief Complaint: Lesion in left lung / Hemoptysis
Age: 33
Gender: Male
Race/Ethnicity: White/Caucasian
Allergies: NKA
Code Status: FULL
Height in cm: 67
Weight in kg: 56.2 (19.4 BMI)
Psychosocial Developmental Stage: Altered due to mental disability
Cognitive Developmental Stage: Altered mental status
Braden Score: 12
Morse Fall Score: 0 (Patient is quadriplegic with 4 rails up)
Infection Control Precautions: None

Pathophysiology

Disease process: The left lesion/mass in left upper lobe of the lung will require a follow up. The current treatment is for a suspected infection by aspiration pneumonia. The way in which this pathogen infects its host is through uncontrolled entry of fluid through the respiratory tract. Fluid gets through macrophage defense mechanisms and invade the bronchi and alveolar space. This triggers an immune response by cytokines, TNFA, and interleukins, which could result in acute lung injury as shown in the patient (Sanivarapu & Gibson, 2021).

S/S of disease: Hemoptysis, mild thrombocytopenia, dyspnea, fever

Method of Diagnosis: CT Chest w/o contrast indicates respiratory illness. Physician note says, "Persistent lesion concerning for infection, aspergilloma, or neoplasm."

Treatment of disease: Amoxicillin-clavulanate is a compound antimicrobial that was prescribed for the patient. This medication is used to treat infection by multiple gram-positive and gram-negative bacteria including those that cause aspiration pneumoniae and community-acquired pneumoniae (Evans et al., 2021). Administration of the antibiotics were reportedly stopped early during the last occurrence.

Lab Values/Diagnostics

Lab	Normal Range	Admission Value	Today's Value
WBC	5-10	5.89	4.71
RBC	4.7-6.1	4.69	3.84
Hgb	14-18	14.4	12
Hct	42-52%	44.1	37.4
Albumin	3.5-5.0	4.1	2.9

RBC is lower than the normal range and could be attributed to the patient's condition that causes them to bleed, which was their chief complaint. There was also a significant amount of blood found in the urinalysis. Hgb and Hct are closely related to red blood cell count so the low values can be explained by that correlation. The white blood cell count is low instead of higher than expected due to infection or inflammation. Leukopenia can be caused by a dietary deficiency and records show that low glucose readings led to blood glucose being taken Q 4h. Low albumin is related to acute reaction to infection (Pagana, 2018). The patient had a chest CT scan to observe for tracheostomy stability and the reason behind the bleeding. It showed a lung lesion in the left upper lobe that could indicate infection or a neoplasm. A biopsy of the affected lung was performed to examine the problem further for an accurate diagnosis and treatment plan. Urinalysis appeared hazy with blood and ketones present on admission but is now normal.

Admission History

Onset: 1 week ago/Location: Tracheostomy site/ Duration: Not able to obtain / Characteristics: Bright red hemoptysis / Associated manifestations: Not able to obtain/ Relieving factors: Not able to obtain / Treatment: Previously treated with antibiotics in 2021

Medical History

Previous Medical History: Generalized idiopathic epilepsy, spastic quadriplegia, visual impairment, osteopenia, constipation, cerebral palsy

Prior Hospitalizations: Hand surgery (2016), seizure (2019), tracheostomy problem and hemoptysis again (2021)

Previous Surgical History: Hernia repair, arm/hand soft tissue procedure (2016), bronchoscopy (2022)

Social History: No prior history of smoking, alcohol use, or drug use

Active Orders

CT guided LUL lung biopsy to examine mass found during diagnostic testing.

Oxygen therapy per protocol to raise low SpO2 with continuous pulse oximetry.

Aerobic, acid fast, fungus culture and sputum screen to assess for infection.

Antibiotics administered every 8 hours to treat suspected infection.

Blood glucose every 6 hours due to previous reading that indicated hypoglycemia.

Pulmonary consult for left lung mass and respiratory therapy for tracheostomy care and follow up appointment on 6/23.

Dietician consult for G tube feedings with Jevity 1.5 containing fiber running continuously at 65 mL/hr as dietary supplement.

Aspiration and seizure precautions due to secretions, immobility, altered mental status, and epilepsy

Physical Exam/Assessment

General: Patient is alert to sound and touch. **Patient is nonverbal.** No acute distress. Calm and content appearance.

Integument: Skin color is normal, dry, and feels warm upon palpation. Patient exhibits no tenting and normal skin turgor. No rashes but **stage 2 pressure ulcer present on coccyx region** with no observable drainage. **Braden score is 12.** Tracheostomy and gastrostomy sites appear normal.

HEENT: Head is atraumatic. Sclera and conjunctiva are normal. PERLA, unable to assess EOMs. External ears appear normal. Nose appears normal with no congestion or rhinorrhea. Mucosa of the mouth is pink and moist. **Dentition is poor.**

Cardiovascular: Normal S1 and S2 heart sounds. Normal heart rate and rhythm. Peripheral pulses 2+. Capillary refill is <3 seconds. No neck vein distention. No edema present.

Respiratory: Pulmonary effort is normal. **Breathing pattern is irregular** but no respiratory distress. **Slightly tachypneic** during assessment. Breathing sounds normal bilaterally with no wheezing or rales.

Genitourinary: Unable to assess urine output but urinalysis shows **hazy, yellow urine** with normal pH **and presence of hematuria** from admission, which could be signs of infection. No observable pain, dysuria, urgency, frequency, or blood in urine. No dialysis. Straight catheter used but discontinued due to being ineffective.

Musculoskeletal: **Alert to sound and touch. Abnormal range of motion in extremities due to spastic quadriplegia. Strength unequal, patient appears frail. Fall risk is 0. Requires ADL assistance for self-care. Patient is incapable of standing or walking.**

Neurological: PERLA. **Strength unequal in extremities. Altered mental status. Alert to sound and touch. Patient is nonverbal.** Sensory appears normal as patient is responsive to touch.

Most recent VS (include date/time and highlight if abnormal): (6/13/22) 1500 (97% SpO2 on Opti flow, 77 bpm, **22 respirations/min**, 128/72 BP, 97.6 F axillary)

Pain and pain scale used: No physical indications of pain. FLACC pain scale used since patient is nonverbal and unable to tell their pain level.

<p align="center">Nursing Diagnosis 1</p> <p align="center">Risk for impaired gas exchange related to airway obstruction as evidenced by respiratory secretions and low SpO2</p>	<p align="center">Nursing Diagnosis 2</p> <p align="center">Risk for impaired skin integrity related to immobility as evidenced by spastic quadriplegia and cerebral palsy</p>	<p align="center">Nursing Diagnosis 3</p> <p align="center">Risk for aspiration related to respiratory secretions and immobility as evidenced by aspiration pneumonia infection</p>
<p align="center">Rationale</p> <p>The patient has excess respiratory secretions that are managed by medications and suctioning of their tracheostomy. They are also at risk for bleeding at their tracheostomy site due to their persistent lung lesion. SpO2 was 93%, which is why oxygen therapy was administered to raise it to acceptable levels. It is important that the airway and breathing is assessed to prevent complications.</p>	<p align="center">Rationale</p> <p>The patient's medical history and inability to move independently puts them at risk of a decubitus ulcer. There is already a stage 2 pressure ulcer in the patient's coccyx area that confirms this risk and a Braden score of 12. This also puts the patient at risk for infection. It is a priority that the patient is protected from injury related to negligence.</p>	<p align="center">Rationale</p> <p>The patient was diagnosed with aspiration pneumonia and was admitted to the ED in 2021 after bleeding occurred at their tracheostomy site. The same occurrence happened months later, and the patient takes medications to reduce secretions.</p>
<p align="center">Interventions</p> <p>Intervention 1: Administer and monitor oxygen therapy, as ordered, to enhance oxygenation and detect signs of decompensation.</p> <p>Intervention 2: Change patient's position at least every 2 hours to mobilize secretions and allow aeration of all lung fields.</p>	<p align="center">Interventions</p> <p>Intervention 1: Position patient for comfort and minimal pressure on bony prominences. Change patient's position at least 2 hours.</p> <p>Intervention 2: Monitor skin condition. Perform prescribed treatment regimen.</p>	<p align="center">Interventions</p> <p>Intervention 1: Monitor and record vital signs to detect signs of aspiration or impaired gas exchange due to aspiration.</p> <p>Intervention 2: Keep suction equipment available at all times to ensure ability to swallow food or saliva.</p>
<p align="center">Evaluation of Interventions</p> <p>Patient's respiratory rate and SpO2 will be within normal range. Patient will not experience dyspnea and have normal breath sounds. Patient's pH and ABGs will be within normal range.</p>	<p align="center">Evaluation of Interventions</p> <p>Patient's skin will remain intact and clear without redness or inflammation. Patient will maintain adequate circulation.</p>	<p align="center">Evaluation of Interventions</p> <p>No pathogens will appear in the patient's cultures. Patient's temperature and WBC count will remain within normal parameters. Auscultation of the lungs will show no adventitious breath sounds.</p>

References (3) (APA):

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