Medications

- Imipenem- cilastatin 1,000mg in 0.9% NaCl 100ml volume 33.3ml/hr given Q6

Pharmacological classification: dehydropeptidase inhibitors

Reason for taking: to treat lung bacterial infection

Nursing assessment: Prior to giving this medication IV, bowel sounds, and temperature were asses.

- Insulin lispro meal coverage 1 unit per 6g carbs- given up to 5 times a day

Pharmacological classification: hormones

Reason for taking: diabetes mellitus

Nursing assessment: prior to giving this medication I had to calculate the patient's carb count.

- Levalbuterol 1.25mg/3ml nebulizer solution given Q6

Pharmacological classification: adrenergic bronchodilators

Reason for taking: cystic fibrosis

Nursing assessment: I did not give this medication the RT did. I however watched her set up and explain it to the patient.

- Pancrelipase 24,000-76,000/120,000 unit capules quntiy 4 3 times a day

Pharmacological classification: enzymes

Reason for taking: to help improve food digestion

Nursing assessment: prior to giving this medication this nurse assesses the willingness of the patient to take it, and how much the patient had consumed that morning.

- Tobramycin nebulizer solution 300mg inhalation twice a day

Pharmacological classification: aminoglycoside antibiotics

Reason for taking: cystic fibrosis and infection

Nursing assessment: I did not give this medication the RT did. I however watched her set up and explain it to the patient.

Lab Values/Diagnostics

No diagnostic testing currently.

WBC(4.00-12.00) - 18.94 These values are constant with the presence of infection (Pagana et al., 2018).

RBC (3.80-5.30) - 3.43 These values are consistent with blood loss (Pagana et al., 2018).

HGB(12.0-15.8-) 8.3 These values are consistent with blood loss (Pagana et al., 2018).

HCT(36.0-47.0)- 26.9 These values are consistent with blood loss (Pagana et al., 2018).

Sodium(133-144)- 130 These values are consistent with Hyponatremia(Pagana et al., 2018).

Bun(7-25) 4 These values are constant with the nutritional issue and can be related to dehydration which was evidenced by a slow-to-return turgor in this patient (Pagana et al., 2018).

Demographic Data

Date of Admission: 2/27/2023
Admission Diagnosis/Chief Complaint: shortness of breath, and fever
Age: 23 years old
Gender: Male
Race/Ethnicity: Caucasian
Allergies: Furosemide, vancomycin, Latex
Code Status: Full
Height in cm: 170.2 cm
Weight in kg: 51kg
Psychosocial Developmental Stage: Middle Adult
Cognitive Developmental Stage: normal
Braden Score: 20
Morse Fall Score: low risk 6
Infection Control Precautions: neutropenic precautions in place

Admission History

The patient is a 23-year-old male was admitted on 2/27/23 with a complaint of shortness of breath and cough. The patient has a history of cystic fibrosis, diabetes mellitus, and pancreatic infancy.

Medical History

Previous Medical History: The patient has a history of cystic fibrosis, pancreatic infancy, Hyponatremia, and diabetes mellitus.

Prior Hospitalizations:
The patient was previously hospitalized on 9/6/22 and 6/12/22 for cystic fibrosis exacerbation
Previous Surgical History: Patient had a Picc double lumen place on 2/28/23

Social History: No smoking, No current alcohol use (Occasional: 1 glass of wine per week), No drugs.

Pathophysiology

Disease process: Cystic fibrosis (CF) is a genetic disorder that affects primarily the lungs and pancreas. CF is caused by a mutation in the cystic fibrosis transmembrane conductance regulator gene. This gene produces a protein that regulates the movement of salt and water in and out of cells. This mutation causes mucus in the body to become thick and sticky, which is detrimental to the lungs and pancreas.
S/S of disease: Persistent coughing: A chronic cough is common due to the thick mucus in the lungs.
Frequent lung infections: CF can make individuals more susceptible to respiratory infection. This can lead to fever, wheezing, and shortness of breath.
Difficulty breathing. Poor growth and weight gain: it affects the pancreas and digestive system. This can lead to poor absorption of nutrients.
Method of Diagnosis: The most standard testing done for cystic fibrosis is the sweat test. This is performed due to the abnormality of the transmembrane conductance regulator gene; this causes the patient to have high levels of salt in their sweat. Genetic testing can identify the specific mutations in the CFTR gene. Chest X-rays and CT scans also help identify abnormalities in the lungs and other organs.
Treatment of disease: The treatments for cystic fibrosis consist of maintenance measures. This includes airway maintenance such as vibrating vests and nebulizer treatments. Antibiotics are used when patients are experiencing frequent lung infections. Promoting good eating habits with a high-calorie diet, due to lack of absorption issues.

Active Orders

DIET- high-calorie drink per meal, magic cup, diet order regular- the patient has pancreatic infancy which causes weight issues.

Vitals Q SHIFT- the patient has an infection

Insulin carb count- the patient has diabetes mellitus.

Oxygen maintenance 92%- the patient has cystic fibrosis.

Neutropenic isolation precautions- the patient has cystic fibrosis and is waiting on a lung transplant.

Physical Exam/Assessment

General: The patient appears alert and oriented to person, place, and time.

The patient is well-groomed and seems to be in no acute distress.

Integument: Skin color was pink, warm, and dry upon palpation. No rash, lesions, and some ecchymosis visible. Nails show significant clubbing, but no cyanosis. Skin turgor is slow to return. Capillary refill was 3 + second range. The patient had no wounds and has a Braden score of 20.

HEENT: Head & Neck: Are symmetrical, and the trachea is midline without deviation. Bilateral pulses are palpable and 2+. No note of nodules.

Ears: Are symmetrical. No lesions, deformities, or lumps. The patient's hearing was normal.

Eyes: Bilateral sclera white, corneas clear, conjunctiva pink/dark pink, no visible drainage bilaterally. PERRLA bilaterally, EOMs intact/slowed.

Nose: Septum is midline, turbinate is pink and moist bilaterally. No visible bleeding. Frontal sinuses are non-tender.

Teeth: Oral mucosa is pink and moist. The patient's teeth looked in good condition.

Cardiovascular: Clear S1 and S2 heard without gallops or rubs. Peripheral pulses are palpable. Capillary refill is more than 3sec, and no edema was noted throughout.

Respiratory: The patient exhibits an abnormal rate and pattern of respiration with the use of accessory muscles. Respirations are not symmetrical and are labored.

Lung sounds are heard throughout with noted wheezing, crackles, and rhonchi. The patient is on 6L of O2 via a high-flow nasal cannula.

Genitourinary: The patient had amber-yellow urine and produced 400 ml during the clinical shift.

Gastrointestinal: The patient has a normal diet with a good appetite. Hypoactive bowel sounds, the patient's last bowel movement was 1 day ago. No distention, incisions, scars, drains, or wounds.

Musculoskeletal: Lower extremities have generalized weakness, but no pain. Hand grips demonstrate equal and normal strength. Pedal pushes are weak but equal in strength. Gait is balanced. The patient requires no assistance with ambulation. The patient is alert and oriented to person, place, and time. PERRLA is intact. Cranial nerves are intact. The patient is currently considered independent.

Neurological: The patient is spontaneous to stimuli, obeys commands, and A&Ox4. Strength is normal and equal in the upper extremities and equal with moderate strength in the lower extremities. Mental status, speech, sensory, and LOC are all intact.

Most recent VS (include date/time and highlight if abnormal): 3/6/23 1057- T: 97.6f oral, P: 102, RR: 22, O2: 90 on 6L, B/P: 110/64

Pain and pain scale used: Verbal pain scale 1-10 was used, patient indicated he had no pain.

Nursing Diagnosis 1 Risk for further infection related to cystic fibrosis infection as evidenced by multiple hospitals stays due to exacerbation in correlation with infection.	Nursing Diagnosis 2 Fatigue related to fluid loss. As evidenced by abnormal labs and signs of dehydration.	Nursing Diagnosis 3 Risk for activity intolerance related to dehydration and bowel issues. As evidenced by a sedentary disposition.
Rationale The patient is considered immunocompromised due to the severity of his current condition. This puts him at a higher risk of contracting infections.	Rationale The patient is currently experiencing fatigue due to the fluctuation of his fluid imbalance.	Rationale The patient is currently experiencing highs and lows of energy due to his fluid fluctuation and loose stools.
Interventions Intervention 1: Assess and monitor the patient's vital signs with attention to temperature. Intervention 2: Encourage the patient to limit visitors while in the hospital.	Interventions Intervention 1: Promote ambulation Intervention 2: Promoter fluid intake	Interventions Intervention 1: Promote ambulation Intervention 2: Promote passive range of motion in bed during moments of weakness.
Evaluation of Interventions The patient is ok with frequent vitals and agrees to let staff know if he is starting to feel worse. He also agrees to limit visitors to those that are health and will ask them to keep their masks on while in his room.	Evaluation of Interventions The patient agreed that ambulation should be happening. PT is also consuming as much water as he can.	Evaluation of Interventions The patient agrees to ambulation and asked for education on exercises he can do in bed when he feels weak.

References (3) (APA):

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Linda Lee Phelps, & Sheila Sparks Ralph. (2018). *Sparks & Taylor's nursing diagnosis pocket guide*. Wolters Kluwer.

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