Medications

- NaCl 0.9% 1,000 mL via IV at 50mL/hr
  - Pharmacological: N/A
  - Therapeutic: Mineral and electrolyte replacement/supplement
  - Key nursing assessment: Lung sounds, patent IV site, BUN and creatinine levels, urine output (fluid overload), signs of edema.
  - Why they are taking: Replacement of sodium and flushing the kidneys in acute kidney injury.
- Erythromycin ophthalmic 0.5-inch (both eyes) QID for 5 days
  - Pharmacological: anti-infective
  - Therapeutic: macrolides
  - Key nursing assessment: Insert 0.5 inch of ointment in the lower lid, have the patients gently close the eye and roll it in all directions. Inform patient that it may cause temporary blurring, stinging, or itching. Culture site before beginning therapy. Take full course of antibiotics.
  - Why they are taking: Conjunctivitis treatment for both eyes.
- Atenolol 25 mg tab PO Daily
  - Pharmacological: Antianginals, antihypertensives.
  - Therapeutic: beta blockers
  - Key nursing assessment: Take the patients apical pulse rate prior to administration and hold the medication if the heart rate is 50 or below. The patient should check their pulse daily and blood pressure biweekly and report any abnormalities. Monitor BUN, serum lipoprotein, potassium, triglycerides, and uric acid levels prior to and periodically throughout therapy.
  - Why they are taking: Hypertension
- Bupropion 150 mg (1 tab) PO Daily
  - Pharmacological: antidepressants
  - Therapeutic: aminoketones
  - Key nursing assessment: May cause false-positive urine test for amphetamines. Assess the patient's mental status and mood in the first few months of therapy due to increased risk for suicidal thoughts or ideations. Monitor hepatic and renal function closely in patients with kidney or liver impairment. Do not break, crush, or chew tablets. Administer with food to avoid GI irritation.
  - Why they are taking: Anxiety treatment
- Ceftriaxone 2,000 mg IV piggyback every 24 hours over 30 minutes (200 mL/hr)
  - Pharmacological: anti-infectives
  - Therapeutic: third generation cephalosporins
  - Key nursing assessment: Ensure the patient is not allergic to ceftriaxone or penicillin's. Obtain a culture and sensitivity before initiating therapy. Monitor for signs and symptoms of clostridioides difficile (C. Diff). Check AST, ALT, Creatinine, and BUN as they may increase.
  - Why they are taking: Urinary tract infection

(Vallerand & Sanoski, 2021).

Lab Values/Diagnostics

- Calcium: 8.5 (low)
  - In renal injury, the kidneys no longer filter out extra phosphorus which causes a decrease in calcium (Van & Bladh, 2017).
- CK: 333 (high)
  - The patient's creatinine is elevated due to the patient having an acute kidney injury (Van & Bladh, 2017).
- BUN: 35 (high)
  - Due to the patient's kidney injury, BUN levels increase as the GFR decreases (Van & Bladh, 2017).

Demographic Data

Date of Admission: 02/17/2023
Admission Diagnosis/Chief Complaint: AKI, UTI, Conjunctivitis
Age: 83 years old
Gender: Male
Race/Ethnicity: Caucasian
Allergies: No known allergies
Code Status: Full code
Height in cm: 175 cm
Weight in kg: 75.1 kg
Psychosocial Developmental Stage: Ego integrity vs. Despair
Cognitive Developmental Stage: Formal operational stage
Braden Score: 22
Morse Fall Score: 60
Infection Control Precautions: Standard precautions

Admission History

Patient presented to the Sarah Bush Lincoln emergency department on 2/17/23 with infection to the right eye and altered mental status. The patient's son found him at home and found him in bed, confused, with things knocked over around the house. The patient's son stated that his "hard drive is just off." The patient states that he has had purulent drainage from his right eye the past two days. The patient's son brought him to his primary physician where he was prescribed antibiotics, he has not yet taken them.

Medical History

Previous Medical History: Anxiety, BPH, Kidney stones, Hypertension, Illiteracy, Insomnia, Mild cognitive impairment, Parkinson's and Tremors of the nervous system.
Prior Hospitalizations: 8/22 SBLHS emergency department for Insomnia, weight loss, nausea, anxiety.
Previous Surgical History: Right inguinal hernia repairment (2018)
Social History: Former smoker (quit more than 30 days ago), denies use of drugs and alcohol. Lives at home alone but is frequently checked on by children who live close by.

Pathophysiology

Disease process: Acute kidney injury (AKI) is a rapid loss of renal function due to kidney damage (Hinkle & Cheever, 2018). Conditions that may cause AKI are hypovolemia, hypotension, heart failure, obstruction by a blood clot, tumor, or kidney stone. This patient has a history of kidney stones which is most likely the reason behind his acute kidney injury. The underlying issues must be corrected before too much damage is done to the kidneys. A kidney injury results in a decreased glomerular filtration rate, leading to azotemia, high creatinine, and fluid retention (Capriotti, 2019).
S/S of disease: AKI presents as oliguria, uremia, encephalopathy, electrolyte imbalance, metabolic acidosis, edema, shortness of breath, confusion, coma, and more (Capriotti, 2019). This patient presented to the emergency room with confusion, electrolyte imbalance, and increased serum creatinine and BUN levels.
Method of Diagnosis: An acute kidney injury is diagnosed by urinalysis, serum electrolytes, serum creatinine, BUN, ABGs, and a CBC (Capriotti, 2019). An AKI might also be diagnosed by x-ray to assess for any changes to the kidney's size and structure. The increased serum creatinine, BUN, and abnormal electrolyte levels diagnosed this patient.
Treatment of disease: Treatment for AKI differentiates depending on where the injury was caused. Fluid administration, Lasix, electrolyte replacement, antibiotics, and stopping certain medications are the most common treatments for AKI (Capriotti, 2019). If the AKI is not treated promptly, the patient may develop chronic kidney disease and need dialysis and other interventions. This patient received both fluids and antibiotics to treat his acute kidney injury.

Active Orders

- Daily weight
  - Daily weights allow the nurse and physician to see if there is any signs of fluid overload.
- Urinalysis (once)
  - The patient came to the hospital confused and disoriented which are common signs of a UTI in older adults.
- BMP (AM draw)
  - BMP shows how well the heart is pumping blood and can indicate heart failure which can be related to kidney failure.
- CBC (AM draw)
  - A CBC can indicate fluid overload or dehydration and high erythropoietin production which all are affected in AKI. A CBC will also show the WBC count which indicates infection.
- CK (AM draw)
  - Creatinine levels show how well the kidney is working which is important to know if treatment is working for an acute kidney injury.
- Magnesium (once)
  - Magnesium is a very important electrolyte that is increased in patients with kidney injuries.
- Cardiac enzymes (once)
  - Cardiac enzymes are commonly elevated in patients with kidney injuries due to the stress it puts on the heart.
- Vitals Q4
  - It is important to establish baseline vital signs to know when something is wrong with the patient.

Physical Exam/Assessment

General: Patient is A&Ox4. Oriented to person, place, date, and time. Patient shows no signs of distress. Patient seen in hospital gown with an overall good appearance.

Integument: Patients skin is pink, dry, and warm. He has a temperature of 37.6 degrees. Skin turgor is elastic. There are no signs of rashes bruises, or wounds. Patient has a Braden score of 22 and no drains present.

HEENT: The patient's head is normocephalic, neck is supple, no signs of masses, no deviated trachea. Denies facial numbness or tingling. Ears are symmetrical, have a pearly gray tympanic membrane and show no signs of cerumen. Eyes are equal, round, reactive and accommodate to light. Both eyes show signs of irritation with purulent drainage. No deviated septum, nares are patent and shows no signs or polyps. Oral mucosa is pink and moist, and the patients' teeth are clean and intact.

Cardiovascular: Patient heart sounds are normal. S1 and S2 noted. Patient is in normal sinus rhythm. HR is 69 bpm. Pedal pulse is 2+ bilaterally. Capillary refill is less than 3 seconds in all extremities bilaterally. Patient has no signs of neck vein distention or signs of edema.

Respiratory: Patient's breath sounds are clear anteriorly and posteriorly. Middle lobe auscultated with clear breath sounds. Patient has no accessory muscle use.

Genitourinary: Patient is on a regular diet at home and is on a low sodium, low protein, low potassium diet at the hospital. The patient is 175 cm tall and weighs 75.1 kg. Bowel sounds were active in all four quadrants. Patients last bowel movement was 2/17/23. There are no signs of distention, incisions, scars, drains, or wounds. Patient has no ostomy, NG tubes, or feeding tubes.

Gastrointestinal: Patient's urine is clear and yellow and has no foul odor. Patient has voided 500 mL during this clinical. There is no pain upon urination, but the patient is having frequency and urgency. The patient is not on dialysis and does not have a catheter inserted. Patient's genitals were not assessed.

Musculoskeletal: Patient shows AROM. Patient has no assistive devices. Patient's strength is equal bilaterally in both the upper and lower extremities. Patient is a fall risk with a score of 60. Patient is up standby one assist.

Neurological: Patient can move all extremities well. Patient's pupils are equal, round, reactive and accommodating to light. Patient is oriented to date, place, time, and situation. Patient's speech is clear. Patient is A&Ox4

Most recent VS (include date/time and highlight if abnormal): 1100 Temp:37.6 BP:168/80 HR:69 O2:93 RR:18

Pain and pain scale used: 1100 numeric pain scale 2/10

Nursing Diagnosis 1	Nursing Diagnosis 2	Nursing Diagnosis 3
Risk for decreased cardiac output related to electrolyte imbalance as evidence by abnormal lab values.	Risk for excess fluid volume related to impaired renal function as evidence by high creatinine levels.	Deficient knowledge related to information misinterpretation as evidence by history of illiteracy.
Rationale The patient has abnormal labs which may cause decreased cardiac output. Kidney injuries also cause the heart to pump harder to get more blood to the kidneys which can lead to heart failure.	**Rationale** The patient is at risk for fluid overload due to the kidneys not being able to expel all the urine and waste in the body.	**Rationale** The patient is a poor historian and has a history of illiteracy which puts the patient at risk for not understanding patient education about the diagnosis.
Interventions **Intervention 1:** Monitor blood pressure and heart rate to see if there is any changes in the hearts ability to pump blood. **Intervention 2:** Monitor EKG and telemetry for changed in cardiac rhythm indicating dysfunction in the heart.	**Interventions** **Intervention 1:** Accurately record the patient's intake and output levels. **Intervention 2:** Weigh the patient at the same time of day, on the same scale, post-void.	**Interventions** **Intervention 1:** Use basic vocabulary that is easily understandable. **Intervention 2:** If possible, include family in patient education to ensure that the caregivers understand the diagnosis and plan of care.
Evaluation of Interventions The patient responded well and agrees with the status of the goals and outcomes.	**Evaluation of Interventions** The patient responded well and agrees with the status of the goals and outcomes.	**Evaluation of Interventions** The patient and family responded well and agrees with the status of the goals and outcomes.

References (3) (APA):

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