Subjective Data

Background

- **Name:** S. G
- **Gender:** Male
- **Age:** 46 y/o
- **Date of Admission:** 2/17/20
- **Reason for Admission:** Cardiac arrest
- **Allergies:** N/A
- **Code Status:** Full Code

Chief Complaint

- Pain

Past Medical History

- Depression, Diabetes mellitus, ESRD, HNT

Family History

- Only child; Parents alive; with dm

Social History/Spiritual History

- High School education; no known work history; Christian; smoker (half packs per day); Alcohol-drinker (socially); No recreational drug use; Married; Wife is a caregiver

Focused Review of Symptoms

- General: sedation (propofol) intubation
- HEENT:
    - No headaches, no apparent head injury; no fever; no chills

    - Eyes: Pupils equal and non-reactive to light
    - Ears: N/A
    - Nose: no nose bleeds
    - No history of tonsillitis or tonsillectomy
- Respiratory: acute respiratory failure, Bilateral coarse breath sounds intubated(02/16/2020)
- Cardiac: Mild Cardiomegaly
- Vascular: swelling in lower extremities, bilateral
- G.I.: no vomiting; no diarrhea
- GU: appears uremic
- Neurological: no syncope; no hemiparesis; weakness; fatigued
- Allergic: no respiratory distress

Objective Data

Vital Signs

- **HR:** 69 bpm
- **BP:** 160/75 mm Hg, Left-upper extremity
- **CMAP:** 103
- **O_2 Sat:** 94%, 2 L Nasal Cannula
- **Temp:** 98° F, Tympanic
- **RR:** 18 breaths/min
- **Weight:** 52.3 kg
- **Height:** 170.1 cm
- **BMI:** 21.3

Medications

- Aspirin Enteric Coated 81 mg PO daily
- Hydralazine (Apresoline) 50 mg PO t.i.d.
- Insulin Glargine (Lantus) 5 units subcutaneous injection at night
- Simvastatin (Zocor) 40 mg PO h.s.
- Heparin 5000 units/mL injectable subcutaneous q12°
- Mercaptopurine 25 mg PO q48°
- Bacitracin Topical (Bacitracin Ointment) daily topical bilateral lower extremity wounds
- Calcium Acetate (Phoslo) 667 mg PO t.i.d. w/f
- Isosorbide Mononitrate Extended Release (Imdur) 30 mg PO daily
- Pantoprazole (Protonix) 40 mg PO daily
- Balsam Peru + Castor Oil Topical (Venelex) b.i.d. to the bilateral heel
- Lactobacillus Acidophilus PO b.i.d.
- Torsemide (Demadex) 20 mg PO daily
- Insulin Lispro (Humalog) 3 units t.i.d. w/f subcutaneous
- Carvedilol (Coreg) 12.5 mg PO b.i.d.
- Acetaminophen IVPB (Ofirmev) 1000 mg IVPB; rate: run at 400 mL/hr; infuse over 15 min ONCE

Lab Results

- Sodium: 150 mEq/L
- Potassium: 4.3 mEq/L
- Chloride: 109 mEq/L
- CO_2: 27.9 mEq/L

- Calcium: 8.3 mg/dL
- Phosphate: 4.2 mg/dL
- Blood Glucose: 148 mg/dL
- BUN: 104 mg/dL
- Creatinine: 3.3 mg/dL
- WBC: 6.8/mm^3
- Neutrophils: 78.3/mm^3
- Hemoglobin: 9.8 g/dL
- Hematocrit: 33.2 %
- Platelets: 189/mm^3
- Albumin: 2.5 g/dL
- Ferritin: 9 ng/mL

Physical Assessment

- **Neurological:**
    - Alert and oriented X 4, confused at times
    - Fatigued; weak
    - Glasses
    - Pupils equal and reactive to light
    - Hard of hearing - follow commands
    - Denies pain
- **Cardiovascular:**
    - Pink skin
    - Radial pulse palpable bilaterally

  - Pedal pulses weak bilaterally
  - Diminished peripheral pulses in lower extremities, bilaterally
  - Capillary refill < 3 seconds
  - Peripheral edema in lower extremities; +2; non-pitting
  - Denies calf tenderness
  - Regular heart rate and rhythm
  - IV: ½ NS @ 50 mL/hr
    - 22 Gauge @ left forearm; placed 3/19/19
  - Hemodialysis: Right chest permacath; IJ Central Venous Access

- **Respiratory:**
  - Respirations non-labored
  - Diminished breath sounds, left
  - Diminished breath sounds, right
  - Pleural effusion
  - Pneumothorax
  - Auditory crackles bilaterally
  - Dyspnea
  - No cough
  - Pulse Ox - 94% w/ 2 L nasal cannula

- **Allergies:**
  - Penicillin

- **Blood Glucose:**
  - Glucometer - 148

- **Gastrointestinal:**
    - Teeth intact
    - Abdomen soft and non-tender; non-distended
    - Positive bowel sounds in all 4 quadrants - abdomen soft & tender
    - Continent; last BM 3/18/19
    - Nutrition: DM diet; low salt; fluid restriction 1200 cc/24 hours
- **Genitourinary:**
    - Oliguria; Uremia
    - Foley catheter; patent; yellow-orange urine
- **Musculoskeletal:**
    - Diminished strength
- **Extremities:**
    - Lower extremity swelling, bilaterally
    - Lower extremities wrapped
    - Bilateral lower extremity lymphedema
- **Integumentary:**
    - Erythematous B/L lower extremities
    - Leg blisters on lower extremities
    - RLE: Open capsular ulcer; wound bed red
    - LLE: Satellite, clear fluid-filled blisters; surrounded by multiple small clear fluid-filled blisters
- **Neurological:**
    - Awake; coherent; fatigued; weak

  - Morse Fall Risk Score > 45

- **Psychological:**
  - Resting calmly
  - English-speaking

Diagnostic Findings:

- **Uremia:**
  - Proteinuria: 7.4 grams
  - Creatinine: 3.3 mg/dL
  - BUN: 104 mg/dL
- **Anemia:**
  - Hemoglobin: 9.8 g/dL
  - Hematocrit: 33.2 %
  - Ferritin: 9 ng/mL
  - Dyspnea
- **Stasis Dermatitis:**
  - Erythematous B/L lower extremities; lymphedema
  - RLE: Open capsular ulcer; wound bed red
  - LLE: Satellite, clear fluid-filled blisters; surrounded by multiple small clear fluid-filled blisters
- **Volume Overload:**
  - Pleural effusion
  - Edema in lower extremities
  - Diminished pulses

- Crackles in both lungs

Assessment

Nursing Diagnosis One

- **Problem 1:** Uremia d/t ESRD
- **NDX 1:** Impaired urinary elimination r/t failing glomerular filtration s/t ESRD AEB impaired excretion of nitrogenous products.

Nursing Diagnosis Two

- **Problem 2:** Anemia
- **NDX 2:** Fatigue r/t decreased hemoglobin s/t Renal failure AEB dyspnea.

Nursing Diagnosis Three

- **Problem 3:** Stasis Dermatitis
- **NDX 3:** Impaired skin integrity r/t volume overload s/t Renal failure AEB bilateral lower extremity lymphedema with blisters.

Nursing Diagnosis Four

- **Problem 4:** Volume Overload
- **NDX 4:** Fluid volume excess r/t pumping problem s/t CHF exacerbation AEB bilateral lower extremity edema, auditory crackles, and diminished pulses.

Plan

Nursing Diagnosis One

- **Impaired urinary elimination r/t failing glomerular filtration s/t ESRD AEB impaired excretion of nitrogenous products:**

- **Intervention 1:** Carry out an assessment on the patient's urine amount as well as color and report a lack of urine output.
  - **Rationale:** To check in case there is a urinary tract or kidney problem or check whether the kidneys are functioning well.
- **Intervention 2:** Examine bladder distention using bladder scanner
  - **Rationale:** To assess the urinary system and urine residual after each patient void. The patient may require catheterization in case the bladder is holding more than 100cc of urine post void.
- **Intervention 3:** Following hemodialysis, it is vital to monitor and, most importantly, replace the electrolytes including, calcium, magnesium, potassium, phosphate, sodium as well as vitamin D.
  - **Rationale:** To avoid electrolyte imbalances caused by uremia and hemodialysis which can affect other body systems including the cardiovascular
- **Intervention 4:** Teach Kegel exercise
  - **Rationale:** To improve blood circulation, enhance ureterovesical junction sphincter tone, and strengthen pelvic floor muscle tone
- **Intervention 2:** Educate the patient on how hemodialysis works before the commencement of dialysis.
  - **Rationale:** To enable the patient to understand the need for dialysis.

Nursing Diagnosis Two

- **Fatigue r/t decreased hemoglobin s/t Renal Failure AEB dyspnea**

- **Intervention 1:** Monitor the saturation of oxygen, and appropriately administer the oxygen: In case SpO_2 is greater than 94%, deliver oxygen through a nasal cannula at 2L per minute and increase the delivery appropriately.
    - **Rationale:** Low RBC's causes oxygen saturation to decline. As such, supplemental oxygen is required to get a Pulse Ox reading of close to 90%.
- **Intervention 2:** Administer (Epogen Procrit) to attain a therapeutic hemoglobin level.
    - **Rationale:** To increase the hemoglobin level in the body.
- **Intervention 3:** Ambulate with the patient in the lobby about 310 feet daily
    - **Rationale:** To assess signs of fatigue during ambulation before discharge.
- **Intervention 2:** Administer IV Iron during Hemodialysis
    - **Rationale:** To achieve therapeutic hemoglobin level and ferritin level.
- **Intervention 4:** Educate the patient in regard to energy-consuming mechanisms
    - **Rationale:** To let the patient know that consuming energy is vital for fatigue reduction.
- **Intervention 5:** Educate the patient in regard to a balanced diet or nutrition. Tell the patient to eat fruits and vegetables.
    - **Rationale:** Leafy greens, including kales and spinach, are rich in folate and iron.

Nursing Diagnosis Three

- **Impaired skin integrity r/t volume overload s/t Renal failure AEB bilateral lower extremity lymphedema with blisters:**

- **Intervention 1:** Assess skin, noting color, moisture, texture, temperature, note erythema, edema, tenderness. Report any changes.
  - **Rationale:** Specific types of dermatitis may have characteristic patterns of skin changes and lesions.
- **Intervention 2:** Educate the patient to participate in vigilant skin monitoring, reporting additional skin integrity breaches (skin tears, blisters, lesions, pressure ulcers, etc.) and the presence of pain.
  - **Rationale:** To avoid further skin breakdown and loss of integrity.
- **Intervention 3:** Apply Bacitracin to the bilateral lower extremities and cover with a non-adhesive foam dressing with a kerlix wrap once per shift.
  - **Rationale:** Bacitracin is an antibiotic ointment to keep the cellulitis from getting infected.
- **Intervention 4:** Apply Moisture Barrier Cream to bilateral lower extremities twice a day.
  - **Rationale:** To maintain skin integrity
- **Intervention 5:** Cleanse the blisters with saline and pat dry once per day.
  - **Rationale:** Cleansing with saline will help to avoid infection and help with the healing process.
- **Intervention 6:** Encourage the patient to adopt skincare routines to decrease skin irritation such as bathing or showering in lukewarm water and using mild soap or non-soap cleansers and allowing the skin to air dry (Taber & Venes, 2017). Avoid rubbing the surface with a towel or cloth.

- **Rationale:** Long bathing or showering in hot water causes drying of the skin and can aggravate itching through vasodilation, and rubbing the skin with a towel can exacerbate the itch-scratch cycle.

Nursing Diagnosis Four

- **Fluid volume excess r/t pumping problem s/t CHF exacerbation AEB bilateral lower extremity edema, auditory crackles, and diminished pulses:**
  - **Intervention 1:** Monitor breath, sound q4h, and blood pressure. Report and worsening adventitious breath sounds and high blood pressure readings greater than 130 systolic.
    - **Rationale:** Adventitious breath sounds and high blood pressure and are critical indicators of fluid overload.
  - **Intervention 2:** Strict I & O's and daily weight. Report a weight difference +/- 2 lb per day.
    - **Rationale:** Sudden weight gains can mean fluid retention.
  - **Intervention 3:** Place the patient in a high-Fowler's position and monitor jugular veins for distention in the upright position.
    - **Rationale:** Raising the head of bed provides comfort in breathing, and repositioning prevents fluid accumulation in dependent areas.
  - **Intervention 4:** Place the patient on a 1200cc/day fluid restriction as well as a sodium restriction and educate the patient on the importance of following this regimen at home.

        - **Rationale:** Excess fluid intake can worsen symptoms and restriction of sodium aids in decreasing fluid retention
    - **Intervention 5:** Administer Furosemide (Lasix) as ordered if the patient is still voiding.
        - **Rationale:** Diuretics help rid the body of excess fluid, which will cause the patient's symptoms to improve.
    - **Intervention 6:** Palpate for pedal pulses and note swelling, edema, and skin characteristics. Elevate the legs with a pillow to decrease the peripheral edema (Gulanick & Myers, 2017).
        - **Rationale:** Edema occurs when fluid accumulates in the extravascular spaces, such as the ankles and legs (Hinkle & Cheever, 2018). Elevation increases venous return to the heart and, in turn, decreases edema. Edematous skin is more susceptible to injury.

Evaluation

Nursing Diagnosis One: Impaired urinary elimination r/t failing glomerular filtration s/t ESRD AEB impaired excretion of nitrogenous products:

- **Outcomes:**
    - The urine of the patient is non-cloudy, clear, but yellow.
    - The patient's urine does not have an odor.
    - The patient has a balanced I&O alongside free bladder distension.
    - The residual volume post-void of the patient was below 100 cc after the bladder scan.

- The patient's electrolytes, including calcium, phosphate, potassium, and sodium, were normal after post-dialysis.
- The patient exhibits Kegel exercise and talks about the significance of participating in regular physical activity, for example, helping get better bladder control.

Nursing Diagnosis Two: Fatigue r/t decreased hemoglobin s/t Renal Failure AEB dyspnea:

- **Outcomes:**
  - The patient's oxygen saturation was maintained at 94%
  - The patient never complained of difficulty in breathing.
  - Hemoglobin levels will rise to 10 g/dL within 48 hrs subsequent to the administration of IV Iron (Van Leeuwan & Bladh, 2017).
  - The patient was capable of walking close to 310 feet without showing signs of fatigue or raising any complaint of fatigue.
  - The patient will be able to verbalize understanding of dietary changes in decreasing anemic symptoms.
  - The patient will be able to state two energy-conserving mechanisms within 24 hours.

Nursing Diagnosis Three: Impaired skin integrity r/t volume overload s/t Renal failure AEB bilateral lower extremity lymphedema with blisters:

- **Outcomes:**
  - The size of the wound will reduce with increased granulation tissue all through the patient's stay in the hospital
  - The never had signs of added infection, for example, pus or redness.

- The adjacent skin remained intact with no swelling
- The patient shows an understanding of the healing tissue as well as injury prevention plan. For example, he understands the medical importance of antibiotic ointment.
- The patient would not experience further skin breakdown at the time of hospital stay
- The wound will be kept clean and will not have new infections, as demonstrated by a lack of pus and redness.

Nursing Diagnosis Four: Fluid volume excess r/t pumping problem s/t CHF exacerbation AEB bilateral lower extremity edema, auditory crackles, and diminished pulses:

- **Outcomes:**
  - The hemodynamic status of the patient is within normal limits, as evidenced by clear lung sounds and blood pressure of 120/67.
  - The patient maintains a urine output of 30 mL/hr and displayed no signs of adverse effects on Lasix during treatments.
  - The patient did not have shortness in breath or difficulty in breathing.
  - The peripheral edema of the patient will increase to 1+ or less within two days.

Conclusion

The case study has resulted in proper acquaintance with the four core ways of knowing, including ethical, aesthetic, empirical, and personal knowledge. I currently understand and know how to implement ways of knowing in my daily nursing practice. The means of knowing played a significant role in decision-making and enabled me to capsulate a holistic image of the invalid. They also steered me through the delivery of care to the patient (Carnago & Mast, 2015).

Furthermore, utilizing the ways of knowing all through the project gave me a chance to understand the nursing practice and myself deeply.

Ethical knowledge refers to the moral perceptive base of nursing. Nurses substantially display it through the choices they make and their judgment and actions regarding given situations (International, 2018-2020). In the presented case study, I demonstrated this way of knowing through strict compliance with the tenets construed in the "Code of Ethics." I ensured the timely provision of care to reduce the risks of complications or harm. I was also honest and respected the patients' dignity. For example, I was honest with the patient about his low hemoglobin. I also demonstrated beneficence by medicating the patient in a timely manner with prescribed medications. I explained to him the use of every drug, prescription, and side effects.

Aesthetic knowledge, however, is characterized by a reflection on the nurses' perceptions regarding patients' needs (Zander, 2017). I demonstrated this way of knowing through establishing a good rapport with the patient together with the members of the family. I also showed empathy toward the patient, thus allowing me to have a better understanding of the patient's condition and situation.

Personal knowledge, on the other hand, refers to the experience and skills of the care providers (Campbell et al., 2018). It is practiced through self-actualization, reflection, and observation. This way of knowing allowed me to establish authentic, therapeutic relationships. I used my personal experience obtained from other cases to deliver high-quality services to the patient. With this knowledge, I was able to approach the situation with a lot of confidence and was able to provide a favorable environment that ensured the patients were comfortable and could provide critical information needed for assessment and diagnosis.

Lastly, empirical knowledge referred, by many, as the science of nursing. It refers to the ability of a nurse to use objective data, evidenced-based-practice, and research studies to offer effective care (Mellor & Gregoric, 2016). In the case study, I utilized empirical knowledge through conducting and interpreting the patient's laboratory results to enable diagnosis. For example, through my assessment of the lab results (creatinine (3.3 mg/dL) and BUN (104 mg/dL), I was able to identify that the patient had a decline in kidneys function.

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